A8630-2U, 12/90

1990 ELECTRICITY SUPPLY & DEMAND

FOR 1990-1999

North American
Electric
Reliability
Council

ANNUAL DATA SUMMARY

1990
Electricity Supply & Demand

For 1990-1999

For the Regional Reliability Councils
of the
North American Electric Reliability Council

North American Electric Reliability Council

November 1990

Copyright © 1990 by the North American Electric Reliability Council. All rights reserved.

Contents

I. INTRODUCTION 5

II. OVERVIEW OF 1990-1999 PROJECTIONS 6

III. DEMAND

Peak Demands 8

- Actual Peak Demands
- 1990-1999 Projections
- Forecast Uncertainty
- Load Management and Interruptible Demands

Annual Net Energy for Load 16

- Actual Net Energy for Load
- 1990-1999 Projections
- Annual Load Factors
- Forecast Uncertainty

IV. SUPPLY

Planned Capacity Resources 20

- 1990-1999 Projections
- Estimated Capacity Margins

Installed Generating Capacity 26

- 1990-1999 Projections
- Summary by Fuel

Electrical Energy Production 32

- 1990-1999 Projections
- Summary by Fuel

Fossil Fuel Requirements 38

- 1990-1999 Projections
- Comparison of Recent Projections

Planned Generating Unit Changes 45

- 1990-1999 Projections
- Summary by Fuel

Transmission 51

- 1990-1999 Projections
- Comparison of Recent Projections

V. APPENDIXES 57

A. Installed Generating Capacity 58
B. Electrical Energy Production 78
C. Fossil Fuel Requirements for Coal, Oil, and Natural Gas 95
D. Generating Unit Additions 115
E. Coal-Fired Generating Unit Additions 135
F. Nuclear Generating Unit Additions 137
G. Hydro (Conventional) Generating Unit Additions 138
H. Oil-Fired Generating Unit Additions 141
I. Gas-Fired Generating Unit Additions 143
J. Pumped Storage Generating Unit Additions 148
K. Other Utility Generating Unit Additions 149
L. Non-Utility Generator (NUG) Additions 151
M. Jointly-Owned Generating Unit Additions 161
N. Generating Unit Retirements 162
O. Generating Unit Codes and Abbreviations 166
P. NERC Regions and Subregions 168

Introduction

The North American Electric Reliability Council's (NERC) **1990 Electricity Supply & Demand** report includes the electricity supply and demand projections for the nine Regional Reliability Councils, the United States, Canada, and the northern portion of Baja California, Mexico for the 1990-1999 period.

The projections were developed by the Regional Reliability Councils and generally reflect conditions as of January 1, 1990. Data on peak demand, load management, interruptible demand, net energy for load, capacity resources, capacity margins, and planned additions and retirements of generating units has been extracted from the April 1, 1990 Coordinated Bulk Power Supply Program (IE-411) reports submitted to the U.S. Department of Energy by the Regional Reliability Councils. Data on generating capacity, electrical energy production, fossil fuel requirements, and existing and planned additions of transmission lines was reported by the Regional Reliability Councils directly to NERC. The codes and abbreviations used in the Appendixes to describe generating unit additions and retirements are defined in Appendix O.

This report also includes forecast bandwidths around the "equal probability" peak demand and annual net energy for load projections for the United States and Canada. That is, there is a 50% chance that these projections will be exceeded and a 50% chance that they will not be reached. The forecast bandwidths are intended to provide a better understanding of the probabilistic nature of NERC's aggregated projections and to illustrate the uncertainty inherent in the forecasting process.

Future uncertainties, many beyond individual electric utility control, could change the underlying assumptions of these projections, the projections themselves, and the trends indicated.

In this report, the United States means the contiguous 48 states. The U.S. data is an aggregate of the projections of those portions of the nine Regional Reliability Councils that supply electricity in the contiguous 48 states. Similarly, the Canada data is an aggregate of the projections of those portions of NPCC, MAPP, and WSCC that serve Canada. Data for that part of the Comision Federal de Electricidad system in the northern portion of Baja California, Mexico, which is interconnected with the U.S. electric utility systems, is included as WSCC-Mexico.

Areas served by the nine Regional Reliability Councils are shown on the inside back cover of this report. Data for five Regions — MAIN, NPCC, SERC, SPP, and WSCC — is also broken down into subregions. The regional and subregional abbreviations are defined in Appendix P.

For the first time, electricity supply and demand data is included for the nine interconnected systems of the Alaska Systems Coordinating Council (ASCC), a NERC Affiliate member. These interconnected systems, commonly known as the Alaska Railbelt electric utility systems, account for 75% of the utility generation in Alaska and serve three major areas: the Anchorage Bowl, the Fairbanks area, and the Kenai Peninsula. Data for the interconnected systems of Alaska is included under the ASCC category.

The **1990 Electricity Supply & Demand** is a companion report to NERC's **1990 Reliability Assessment** report, which was published in September 1990. It includes the detailed background data on which the assessment report is based. It also supersedes the data included in NERC's June 1990 **Advance Release** of the **1990 Electricity Supply & Demand** report.

Questions about this report may be directed to Virginia C. Sulzberger, Director-Engineering, and Colin L. Wright, Engineering Analyst, at the NERC office, (609) 452-8060.

DEMAND

DEMAND — PEAK DEMANDS

	Summer	1990	1999	Annual Growth Rate (%)
PEAK DEMANDS (Thousands of MW) *(Tables 2 & 3)*	United States	539	646	2.0
	Canada	56	69	2.3
	Winter	**1990/1991**	**1999/2000**	
	United States	490	592	2.1
	Canada	79	96	2.2

	Summer	1990	1999	Annual Growth Rate (%)
PEAK DEMAND FORECAST UNCERTAINTY (Thousands of MW) *(Figures 2 and 3)*	High	555	708	2.7
	United States	**539**	**646**	**2.0**
	Low	522	580	1.2
	Winter	**1990/1991**	**1999/2000**	
	High	82	111	3.5
	Canada	**79**	**96**	**2.2**
	Low	76	82	0.8

DEMAND — ANNUAL NET ENERGY FOR LOAD

	Annual	1990	1999	Annual Growth Rate (%)
NET ENERGY FOR LOAD (NEL) (Millions of MWh) *(Table 5)*	United States	2,890	3,476	2.1
	Canada	432	543	2.6

	Annual	1990	1999	Annual Growth Rate (%)
NEL FORECAST UNCERTAINTY (Millions of MWh) *(Figures 5 and 6)*	High	2,939	3,800	2.9
	United States	**2,890**	**3,476**	**2.1**
	Low	2,833	3,134	1.1
	High	443	625	3.9
	Canada	**432**	**543**	**2.6**
	Low	421	466	1.1

SUPPLY

SUPPLY — CAPACITY RESOURCES, MARGINS, and ADDITIONS

PLANNED CAPACITY RESOURCES (Thousands of MW) *(Tables 6 and 7)*

Summer	1990	1999	Annual Growth Rate (%)
United States	677	766	1.4
Canada	86	105	2.3
Winter	**1990/1991**	**1999/2000**	
United States	692	780	1.3
Canada	91	109	2.1

ESTIMATED CAPACITY MARGINS (%) *(Tables 8 and 9)*

Summer	1990	1999
United States	22	18
Winter	**1990/1991**	**1999/2000**
Canada	16	15

PLANNED GENERATING UNIT ADDITIONS (Thousands of MW) *(Table 26)*

	1990-1999					
	Utility					
Summer	Coal	Nuclear	Hydro	Other	Non-Utility	Total
United States	13.4	9.3	1.3	43.9	18.3	86.2
Canada	3.0	3.5	10.9	2.9	1.7	22.0

SUPPLY — TRANSMISSION ADDITIONS

PLANNED TRANSMISSION ADDITIONS (Circuit Miles in Thousands) *(Tables 33 and 34)*

	1990-1999					
	AC Voltage (kV)				DC Voltage (kV)	
Location	230	345	500	765	±250 and above	Total
United States	4.9	4.0	4.3	0.1	0.1	13.4
Canada	2.4	1.6	3.0	1.7	0.7	9.4

Peak Demands

The demand data includes 1985-1989 actual and 1990-1999 projected electrical peak demands for the United States and Canada. Actual 1989 and projected 1990-1999 peak demands are also included for the nine member (and one Affiliate member) Regional Reliability Councils (Regions) and their subregions. All peak demands are 60-minute integrated demands.

Within a Region, the peak demands of individual electric utilities may occur in different months within a given season. Therefore, the level of peak demand coincidence reflected in the regional and subregional peaks ranges from coincident hourly peak demands to noncoincident seasonal peak demands. However, the majority of regional peak demands represent noncoincident seasonal peaks. Similarly, the peak demands for the United States and Canada represent aggregates of noncoincident seasonal peak demands.

The summer period includes June through September, while the winter period begins in December and runs through March of the following year.

Actual Peak Demands

Over the 1985-1989 period, the summer peak demand for the United States increased at an average annual growth rate of 3.3%. In winter peaking Canada, the average annual growth rate was 3.8% over this same period. These growth rates are based on actual metered peak demands, which have not been adjusted for weather or operator-controlled demand reductions and emergency operating procedures that may have been in effect at the time of peak. Depending on the period selected, various average annual growth rates for the United States and Canada for summer or winter can be calculated from the data in Table 1.

Due to relatively moderate temperatures, the summer peak demand for the United States in 1989 was 1.1% lower than the 1988 record-setting peak demand experienced during the extremely hot 1988 summer. However, the 1989 peak was 0.3% above forecast. In Canada, the 1989/90 winter peak demand was 2.7% above the 1988/89 winter peak, but 0.3% below forecast. Table 1 compares the 1989 actual peak demands for the United States and Canada with those of 1988 and with the 1989 forecasts made just one year earlier.

Peak Demands

Forecast peak demands represent total internal peak demands. Internal peak demands have already been reduced to reflect the effects of demand management programs, such as conservation, not under the direct control of utility system operators, but generally include those customer demands under the direct control or management of the utility system operators, such as utility-controlled water heaters and contractually interruptible customers.

The internal demand for a system is equal to the sum of the metered (net) power outputs of all generators within a system and the metered line flows into the system, less the metered line flows out of the system. Thus, internal peak demand is the maximum hourly integrated demand of all customer demands plus losses.

1990-1999 Projections

The aggregated summer peak demand for the United States is projected to increase by 106,605 MW over the 1990-1999 period — corresponding to an average annual growth rate of 2.0%. The aggregated winter peak demand for Canada is projected to increase by 17,042 MW over the 1990-1999 period — corresponding to an average annual growth rate of 2.2%. Although Canada, a winter peaking area, is projecting a summer peak demand growth rate slightly higher than its winter peak demand growth rate, and the United States, a summer peaking area, is projecting a winter peak demand growth rate higher than its summer peak demand growth rate, over the next ten years, the United States is projected to remain summer peaking and Canada winter peaking.

There are no major differences in the projected 1990-1999 average annual growth rates in the United States and Canada compared to the 1989-1998 projections of last year. However, the absolute values of the peak demand projections in each year are about 1.8% higher in the United States and about 2.9% higher in Canada than the projections made last year.

Details of the 1990-1999 peak demand projections for the United States, Canada, and the Regional Reliability Councils and their subregions are shown in Tables 2 (summer) and 3 (winter). These tables include 1989 actual peak demands and projected average annual peak demand growth rates. To be meaningful, the projected growth rates are average annual rates calculated for the weather-normalized projections over the nine years from the first (1990) to the tenth (1999) year of the forecast period (rather than over the ten-year period from the actual unadjusted metered peak demand of 1989 to the last year (1999) of the forecast).

The summer-to-winter peak demand ratios for the United States, Canada, and the Regions range from the highly winter peaking NPCC-Canada area to the highly summer peaking WSCC-Mexico and SPP areas. The summer-to-winter peak demand ratios of Figure 1, in percent, are calculated by dividing the summer peak demand for a given year (i.e., 1990) by the following winter (i.e., 1990/91) peak demand and multiplying the resulting ratio by 100.

The United States is expected to continue to be summer peaking throughout the forecast period with its winter peak demand projected to be about 90% of the prior summer's peak. Canada is expected to be highly winter peaking throughout the forecast period with a summer-to-winter peak demand ratio of about 70%.

The 1990-1999 projected and 1980-1989 actual peak demands for the United States and Canada are illustrated in Figures 2 and 3, respectively. The actual peak demands in the United States increased about 2.3% per year since 1980. Last year (1989) was the first time since 1982 that the actual U.S. summer peak demand did not exceed the prior year's peak. Similarly, in Canada, winter peak demands have grown steadily since 1980 except for two years (the winters of 1982/83 and 1986/87) when actual peak demand did not exceed the prior winter's peak.

Forecast Uncertainty

The projections of peak demand for the United States and Canada are aggregates of the forecasts of the individual utilities comprising the Regional Reliability Councils. These individual utility forecasts are generally "equal probability" forecasts that represent the midpoints of probabilistic distributions of forecast values. That is, there is a 50% chance that these forecasts will be exceeded and a 50% chance that they will not be reached.

To provide a better understanding of the aggregated projections and to illustrate the uncertainty inherent in the forecasting process, an estimated 80% probability peak demand bandwidth was defined around the base or equal probability projections for the United States and Canada as shown in Figures 2 and 3, respectively. In each case, the high and low bounds of the bandwidth are defined such that there is a 10% chance that peak demand will exceed the upper bound and a 10% chance that demand will be less than the lower bound. In other words, there is an estimated 80% probability that future peak demands for the United States and Canada will fall within their respective bandwidths. The U.S. peak demand bandwidth growth rates range from 1.2% to 2.7% per year over the forecast period. Comparable winter peak demand bandwidth growth rates for Canada range from 0.8% to 3.5% per year.

It would be incorrect to apply the absolute value or percentage range of the forecast bandwidths in Figures 2 and 3 to the peak demand projections of any Region, subregion, group of utilities, or individual utility. The high and low bounds represent a composite of all member utilities in each country and apply only to the aggregated peak demand projections of the United States and Canada.

Load Management and Interruptible Demands

Load management and interruptible demands — the direct utility-controlled portions of demand management — are expected to increase in the United States from 13,100 MW in the summer of 1990 to 18,900 MW in 1999. Similarly, these direct utility-controlled programs are projected to increase in Canada from 1,900 MW in the winter of 1990/91 to 2,300 MW in 1999/2000. These "managed loads" are included in (not subtracted from) the peak demands of Tables 2 and 3 and are summarized in Tables 2A (summer) and 3A (winter).

The peak demand reductions projected to be available from load management and interruptible demands are illustrated in Figures 2 and 3 for the United States and Canada, respectively. That is, the forecast peak demands reduced by load management and interruptible demands (Tables 2A and 3A) represent the net peak demands (shown by the dashed lines in Figures 1 and 2) for which utilities generally plan capacity resources.

Peak Demands

Table 1 — Peak Demands

1985-1989 Actual[a] Peak Demands — Thousands of MW

Summer	1985	1986	1987	1988	1989	Average Growth (%/year)
United States	461	477	496	529	523	3.3
Canada	45	47	50	53	55	5.3
Winter	**1985/86**	**1986/87**	**1987/88**	**1988/89**	**1989/90**	**Average Growth (%/year)**
United States	429	423	448	467	496	3.7
Canada	64	64	70	73	75	3.8

Recent Actual[a] and Forecast[b] Peak Demands — Thousands of MW

Summer	1988 Actual	1989 Actual	Change (%)	1989 Forecast	Actual vs. Forecast (%)
United States	529	523	-1.1	522	0.3
Canada	53	55	4.2	54	1.5
Winter	**1988/89 Actual**	**1989/90 Actual**	**Change (%)**	**1989/90 Forecast**	**Actual vs. Forecast (%)**
United States	467	496	6.4	476	4.4
Canada	73	75	2.7	75	-0.3

NOTE: Figures are rounded. Percentages are based on complete data.

[a] Metered internal peak demands. Unadjusted for operator-controlled demand reductions, emergency operating procedures, or weather.

[b] Based on normal weather for each system within the respective Regions and consistent with the April 1989 IE-411 report forms.

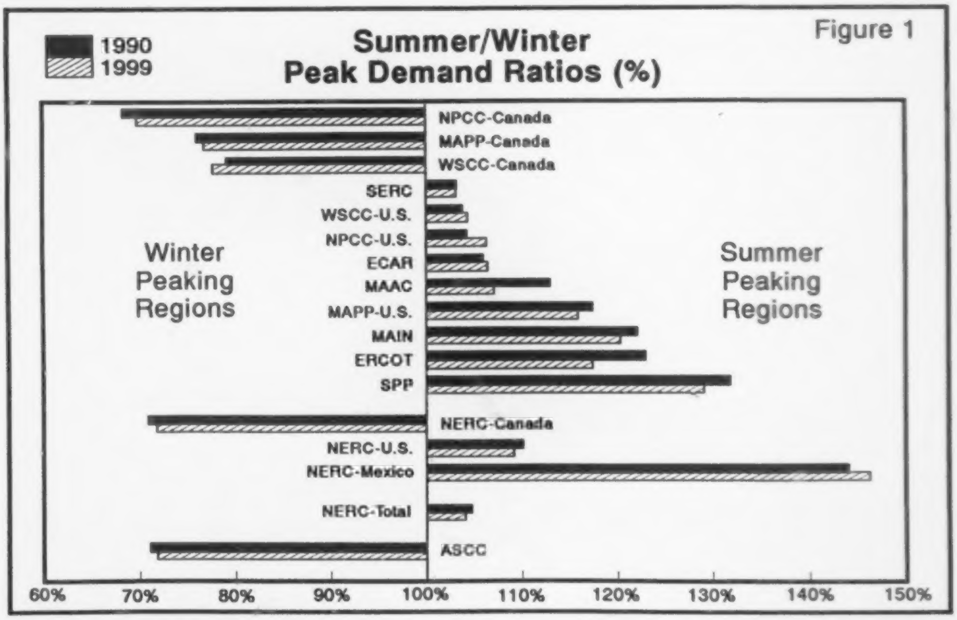


Figure 1

Summer/Winter Peak Demand Ratios (%)

Table 2
Actual and Projected Peak Demands[a] – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED										1990-1999 Average Annual Growth
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	(%)
United States												
ECAR	75442	78913	80376	81870	83088	84332	85708	87088	88505	89898	91251	1.6
ERCOT	40402	41880	42717	44452	45355	46020	46919	48196	49436	50688	52171	2.5
MAAC[b,c]	41614	42735	43519	44269	44930	45585	46207	46809	47432	48004	48624	1.4
MAIN	39460	39191	39871	40514	41140	41788	42473	43176	43873	44670	45438	1.7
Cmnwlth Edison	16785	16500	16800	17150	17500	17850	18200	18550	18900	19300	19700	2.0
East Missouri	6996	6994	7069	7143	7237	7332	7426	7521	7626	7740	7843	1.3
S Cent Illinois	7119	7051	7150	7245	7304	7393	7500	7611	7709	7816	7927	1.3
Wis-Upper Mich	8560	8646	8852	8976	9099	9213	9347	9494	9638	9814	9968	1.6
MAPP	24336	24754	25211	25515	25923	26285	26653	27056	27532	27986	28454	1.6
NPCC	45031	47001	47832	49046	50261	51438	52476	53414	54307	55253	56321	2.0
New York	25390	26620	27250	27770	28240	28640	29120	29560	30030	30520	30990	1.7
NEPOOL	19641	20381	20582	21276	22021	22798	23356	23854	24277	24733	25331	2.4
SERC	117051[d]	121636[d]	125177[d]	129869	133679	136962	140907	144577	148183	151701	154983	2.7
Florida	27972	28010	28742	29165	30077	30899	31861	32671	33449	34270	35107	2.5
Southern	29088	30475	31458	32429	33298	34262	35251	36203	37168	38141	39000	2.8
TVA	20768	22408	23155	23983	24827	25686	26565	27266	27965	28668	29371	3.1
VACAR	39901	41126	42404	44292	45477	46115	47230	48437	49601	50622	51505	2.5
SPP	49439	51030	52050	53008	53777	54797	55954	57092	58180	59275	60404	1.9
Southeast	21219	21428	21695	21968	22176	22477	22777	23161	23565	23992	24449	1.5
West Central	16640	17127	17535	17880	18145	18558	19083	19488	19847	20208	20558	2.0
Northern	11580	12475	12820	13160	13456	13762	14094	14443	14768	15075	15397	2.4
WSCC[d]	90657	92168	93911	95567	97355	99165	101123	103021	104704	106505	108267	1.8
NW Pool	27718	28246	28546	28904	29267	29581	29921	30302	30703	31103	31413	1.2
Rocky Mt Area	6326	6452	6581	6711	6812	6930	7091	7290	7405	7558	7700	2.0
Ariz-N. Mex	12176	12303	12616	12901	12915	13331	13729	14039	14347	14573	14894	2.1
Calif-So. Nev	44437	45263	46254	47325	48473	49462	50512	51517	52367	53390	54383	2.1
TOTAL(U.S.)	523432	539308	550664	564110	575508	586372	598420	610429	622152	633980	645913	2.0
Canada												
MAPP	4427	4541	4791	4920	5081	5191	5202	5309	5433	5541	5636	2.4
NPCC	39740	39765	41497	42472	43566	44309	45181	46370	47251	47984	49057	2.4
New Brunswick	1634	1661	1696	1738	1794	1849	1906	1962	2020	2078	2135	2.8
Nova Scotia	1168	1352	1392	1428	1465	1503	1545	1591	1638	1684	1734	2.8
Ontario	20025	20169	20709	21300	21706	22107	22497	23014	23433	23789	24163	2.0
Quebec	16913	16583	17700	18006	18601	18850	19233	19803	20160	20433	21025	2.7
WSCC	11105	11487	11696	11968	12287	12601	12870	13155	13428	13741	14042	2.3
TOTAL(Canada)	55272	55793	57984	59360	60934	62101	63253	64834	66112	67266	68735	2.3
Mexico												
WSCC	817	874	940	1023	1103	1190	1294	1391	1482	1575	1675	7.5
NERC-Total	579521	595975	609588	624493	637545	649663	662967	676654	689746	702821	716323	2.1
ASCC	455	455	467	468	468	474	477	482	488	496	501	1.1

[a] Consistent with Item 3A, line 03, April 1, 1990 IE–411 reports.

[b] Peak demands are coincident.

[c] Load management loads (customer demands under the direct control of the electric utility system operator or interruptible by the customer at the utility's request in accordance with contractual arrangements) are not included.

[d] The sum of the subregional peak demands do not necessarily equal the coincident regional total because of subregional peak demand diversity.

Table 2A
Projected Total Load Management[a] – Summer – MW
(1990–1999 Forecast)

	PROJECTED									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States										
ECAR	955	961	965	971	971	971	970	970	1030	1030
ERCOT	1586	1434	1633	1696	1484	1444	1499	1555	1611	1665
MAAC[b]	1184	1316	1439	1573	1672	1781	1891	1994	2086	2156
MAIN	884	917	953	1040	1066	1062	1129	1196	1198	1194
Cmnwlth Edison	200	200	200	200	200	200	200	200	200	200
East Missouri	191	187	188	195	200	208	282	357	367	376
S Cent Illinois	277	284	289	284	280	264	253	242	232	217
Wis-Upper Mich	216	246	276	361	386	390	394	397	399	401
MAPP	224	237	291	307	291	306	318	329	339	352
NPCC	887	1180	1487	1731	1954	2171	2399	2614	2811	2969
New York	495	685	885	1045	1195	1355	1515	1665	1805	1925
NEPOOL	392	495	602	686	759	816	884	949	1006	1044
SERC	3365	3615	3908	4126	4401	4642	4842	4997	5119	5238
Florida	1218	1414	1649	1810	1971	2163	2306	2400	2440	2477
Southern	467	479	492	504	566	566	591	616	663	714
TVA	822	816	812	820	836	857	861	866	870	874
VACAR	858	906	955	992	1028	1056	1084	1115	1146	1173
SPP	433	531	565	583	580	681	678	692	767	781
Southeast	97	83	83	83	83	83	83	101	177	189
West Central	139	240	265	266	243	318	294	271	246	222
Northern	197	208	217	234	254	280	301	320	344	370
WSCC[c]	3534	3572	3561	3325	3343	3360	3352	3367	3411	3466
NW Pool	1213	1165	1126	1122	1074	1097	1058	1084	1084	1084
Rocky Mt Area	184	187	188	189	179	189	190	191	192	193
Ariz-N. Mex	677	689	705	413	414	414	403	403	408	408
Calif-So. Nev	1416	1501	1531	1600	1640	1666	1670	1688	1730	1783
TOTAL(U.S.)	13052	13763	14802	15352	15762	16418	17078	17714	18372	18851
Canada										
MAPP	0	0	0	0	0	0	0	0	0	0
NPCC	1710	1829	1997	2063	2118	2170	2221	2223	2224	2226
New Brunswick	52	52	52	52	52	52	52	52	52	52
Nova Scotia	155	156	156	157	160	162	163	165	166	168
Ontario	753	771	789	804	806	806	806	806	806	806
Quebec	750	850	1000	1050	1100	1150	1200	1200	1200	1200
WSCC	115	83	85	88	86	88	88	89	90	90
TOTAL(Canada)	1825	1912	2082	2151	2204	2258	2309	2312	2314	2316
Mexico										
WSCC	0	0	0	0	0	0	0	0	0	0
NERC-Total	14877	15675	16884	17503	17966	18676	19387	20026	20686	21167
ASCC	2	2	2	2	2	2	2	2	2	2

[a] Load management includes only those customer demands under the direct control of the electric utility system operator or interruptible by the customer at the utility's request in accordance with contractual arrangements. Consistent with the sum of lines 04 and 05, Item 3A, April 1, 1990 IE-411 reports.

[b] These load management loads have already been subtracted from the peak demands for MAAC on Table 2.

[c] Since the subregional peak demands may occur in different months than the coincident total WSCC-U.S. peak demand, the sum of the subregional load management loads based on those peak demands may not always equal the WSCC-U.S. total.

Table 3
Actual and Projected Peak Demands[a] – Winter – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED										1990/91–1999/00 Average Annual Growth
	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	(%)
United States												
ECAR	73080	74455	75846	77051	78219	79373	80788	82055	83345	84617	85756	1.6
ERCOT	38388	34059	35633	36635	37394	38248	39419	40596	41777	43109	44444	3.0
MAAC[b,c]	38161	37825	38767	39731	40631	41512	42298	43134	43905	44698	45423	2.1
MAIN	33770	32117	32733	33250	33875	34512	35126	35754	36421	37124	37761	1.8
Cmnwlth Edison	13280	13090	13370	13640	13910	14190	14460	14730	15040	15350	15670	2.0
East Missouri	6216	5680	5810	5948	6082	6226	6350	6494	6628	6770	6902	2.2
S Cent Illinois	6332	5818	5914	5982	6082	6197	6314	6421	6536	6655	6761	1.7
Wis-Upper Mich	7942	7529	7639	7680	7801	7899	8002	8109	8217	8349	8428	1.3
MAPP	21360	21087	21511	21892	22207	22547	22898	23299	23711	24110	24573	1.7
NPCC	42588	45070	45774	46739	47595	48487	49356	50144	50970	51940	52950	1.8
New York	23003	24200	24710	25210	25580	25970	26410	26820	27240	27670	28110	1.7
NEPOOL	19585	20870	21064	21529	22015	22517	22946	23324	23730	24270	24840	2.0
SERC	121995	117810	121530	125234	128910	132606	136225	139823	143239	146735	150196	2.7
Florida	31094	30872	31219	32367	33519	34710	35849	36952	37980	39039	40084	2.9
Southern	25268	24654	25451	26135	26837	27544	28249	29037	29821	30485	31206	2.7
TVA	25468	21633	22404	23181	23992	24815	25411	26006	26598	27201	27793	2.8
VACAR	40165	40651	42456	43551	44562	45537	46716	47828	48840	50010	51113	2.6
SPP	42268	38731	39447	40187	41025	41946	42981	43954	44911	45858	46832	2.1
Southeast	18913	16286	16503	16630	16892	17174	17455	17782	18133	18508	18888	1.7
West Central	13653	13106	13499	13849	14186	14576	15074	15449	15802	16143	16483	2.6
Northern	9702	9339	9445	9708	9947	10196	10452	10723	10976	11207	11461	2.3
WSCC[d]	84768	88754	90173	92277	93555	95278	97014	98721	100290	102001	103767	1.8
NW Pool	33927	36571	36868	37307	37739	38157	38657	39150	39688	40196	40617	1.2
Rocky Mt Area	6245	6419	6571	6715	6832	6968	7158	7333	7472	7623	7777	2.2
Ariz-N. Mex	8921	9609	9809	10331	10678	11032	11361	11611	11883	12072	12348	2.8
Calif-So. Nev	35675	36236	37058	37950	38362	39168	39944	40777	41396	42263	43062	1.9
TOTAL(U.S.)	496378	489908	501414	512996	523411	534509	546105	557480	568569	580192	591702	2.1
Canada												
MAPP	5998	5969	6167	6353	6549	6684	6814	6936	7105	7233	7335	2.3
NPCC	54657	58149	59676	61614	62648	63804	65340	66714	67788	68883	70258	2.1
New Brunswick	2433	2661	2743	2819	2906	2991	3074	3156	3238	3319	3397	2.8
Nova Scotia	1728	1858	1914	1964	2017	2070	2129	2193	2259	2324	2394	2.9
Ontario	23491	24615	25336	25880	26356	26855	27321	27990	28378	28788	29207	1.9
Quebec	27005	29015	29683	30951	31369	31888	32816	33375	33913	34452	35260	2.2
WSCC	13888	14493	14988	15351	15768	16142	16528	16920	17274	17666	18060	2.5
TOTAL(Canada)	74543	78611	80831	83318	84965	86630	88682	90570	92167	93782	95653	2.2
Mexico												
WSCC	556	607	660	712	768	835	898	956	1016	1081	1146	7.3
NERC-Total	571477	569126	582905	597026	609144	621974	635685	649006	661752	675055	688501	2.1
ASCC	626	640	643	644	649	655	663	671	681	689	697	1.0

[a] See footnote a of Table 2.
[b] See footnote b of Table 2.
[c] See footnote c of Table 2.
[d] See footnote d of Table 2.

Table 3A
Projected Total Load Management[a] – Winter – MW
(1990–1999 Forecast)

	PROJECTED									
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00
United States										
ECAR	960	965	970	975	975	975	975	1035	1035	1035
ERCOT	1322	1489	1656	1438	1385	1430	1473	1520	1563	1605
MAAC[b]	801	833	865	900	928	960	976	989	1002	1016
MAIN	793	809	829	931	930	929	993	1063	1065	1068
Cmnwlth Edison	200	200	200	200	200	200	200	200	200	200
East Missouri	191	187	188	195	200	208	282	357	367	376
S Cent Illinois	200	203	204	198	187	174	162	155	146	138
Wis-Upper Mich	202	219	237	338	343	347	349	351	352	354
MAPP	197	203	222	241	270	300	326	351	377	401
NPCC	753	988	1200	1324	1462	1589	1715	1833	1935	1989
New York	275	415	555	635	715	795	885	965	1025	1055
NEPOOL	478	573	645	689	747	794	830	868	910	934
SERC	3598	3990	4357	4659	4910	5123	5344	5504	5642	5781
Florida	1661	1934	2232	2437	2671	2836	3006	3077	3131	3182
Southern	479	492	504	566	566	591	616	663	714	765
TVA	625	636	626	628	638	653	656	661	665	669
VACAR	833	928	995	1028	1035	1043	1066	1103	1132	1165
SPP	339	469	480	494	482	571	559	549	540	544
Southeast	83	83	83	83	83	83	83	83	83	95
West Central	118	243	244	245	221	297	273	248	224	201
Northern	138	143	153	166	178	191	203	218	233	248
WSCC[c]	2176	2114	2456	2436	2426	2420	2409	2411	2413	2415
NW Pool	1244	1166	1124	1111	1099	1095	1082	1082	1082	1083
Rocky Mt Area	158	167	167	167	159	169	169	170	171	172
Ariz-N. Mex	334	335	704	721	722	723	711	712	713	695
Calif-So. Nev	459	460	460	461	462	463	463	464	464	465
TOTAL(U.S.)	10939	11860	13035	13398	13768	14297	14770	15255	15572	15854
Canada										
MAPP	0	0	0	0	0	0	0	0	0	0
NPCC	1771	1935	1997	2050	2103	2155	2156	2158	2159	2161
New Brunswick	52	52	52	52	52	52	52	52	52	52
Nova Scotia	155	156	156	157	160	162	163	165	166	168
Ontario	714	727	739	741	741	741	741	741	741	741
Quebec	850	1000	1050	1100	1150	1200	1200	1200	1200	1200
WSCC	91	86	90	94	99	102	104	105	107	109
TOTAL(Canada)	1862	2021	2087	2144	2202	2257	2260	2263	2266	2270
Mexico										
WSCC	0	0	0	0	0	0	0	0	0	0
NERC-Total	12801	13881	15122	15542	15970	16554	17030	17518	17838	18124
ASCC	2	2	2	2	2	2	2	2	2	2

[a] See footnote a of Table 2A.

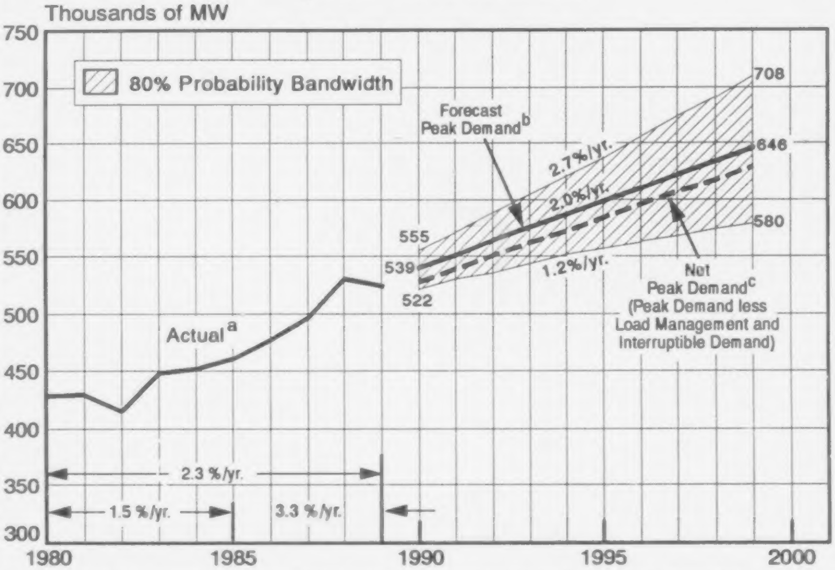
[b] These load management loads have already been subtracted from the peak demands for MAAC on Table 3.

[c] See footnote c of Table 2A.

United States

Figure 2

Summer Peak Demands
(1990 - 1999 Forecast)



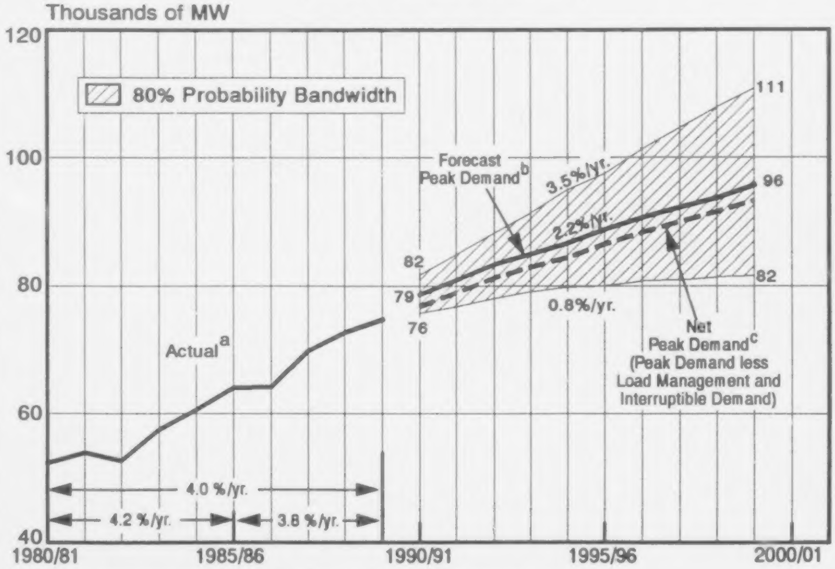
[a] Unadjusted for operator-controlled demand reductions, emergency operating procedures, or weather.

[b] Item 3a, line 03, April 1, 1990 IE-411 reports. [c] Item 3a, line 06, April 1, 1990 IE-411 reports.

Canada

Figure 3

Winter Peak Demands
(1990 - 1999 Forecast)



[a] Unadjusted for operator-controlled demand reductions, emergency operating procedures, or weather.

[b] Same as Item 3a, line 03, April 1, 1990 IE-411 report forms. [c] Same as Item 3a, line 06, April 1, 1990 IE-411 report forms.

Annual Net Energy for Load

The annual net energy for load (NEL) represents the annual electrical energy needed to serve the electric utility's customers and includes transmission losses. It represents the electrical energy generated by the utilities' own generating sources plus electrical energy purchases from other utilities and non-utility generators, less electrical energy sales to other utilities. NEL does not include electrical energy pumping (or charging) requirements for pumped storage (or other energy storage) generating facilities.

Actual Net Energy for Load

Over the 1985-1989 period, the annual NEL in the United States increased at an average annual growth rate of 3.3%, an annual growth rate similar to the summer peak demand. In Canada, over the same period, the annual NEL increased at 5.4% per year compared to a winter peak demand average annual growth rate of 3.8%. Various average annual NEL growth rates for the United States and Canada can be calculated from the data in Table 4.

The 1989 NELs in the United States and Canada exceeded their respective 1988 actual NEL values and their respective 1989 NEL forecasts. Table 4 summarizes this NEL comparison for the United States and Canada.

1990-1999 Projections

The annual NEL for the United States is projected to increase by 586 million MWh over the 1990-1999 period — corresponding to an average annual growth rate of 2.1%. Similarly, the annual NEL for Canada is projected to increase by 111 million MWh over the forecast period at an average annual growth rate of 2.6%. Details of the U.S., Canadian, regional, and subregional 1990-1999 NEL projections, their associated average annual growth rates, and 1989's NEL actuals are shown in Table 5.

Annual Load Factors

The regional 1990 annual load factors range from over 65% in WSCC-Canada and WSCC-U.S. to about 55% in SPP. By 1999, most annual load factors are expected to increase. The projected annual load factors for the United States, Canada, and the Regions for the first (1990) and last (1999) years of the forecast period are shown in Figure 4.

The annual load factors for each year are calculated by dividing the annual NEL (Table 5) by the product of peak demand (the greater of the summer or winter peak demands of Table 2 or 3) and 8,760 hours per year. The resulting load factor ratio is multiplied by 100 to express the load factor in percent.

Forecast Uncertainty

The 1990-1999 projected and 1980-1989 actual annual NELs for the United States and Canada are illustrated in Figures 5 and 6, respectively. The actual NELs for the United States increased about 2.4% per year since 1980. Since 1982, each U.S. actual NEL has exceeded the prior year's NEL. Similarly, in Canada, the actual NELs increased steadily each year since 1980 at an average annual rate of 4.4%.

The projections of annual NEL for the United States and Canada are aggregates of the forecasts of the individual utilities comprising the Regional Reliability Councils. These individual utility NEL forecasts are generally "equal probability" forecasts meaning that there is a 50% chance that the forecasts will be exceeded and a 50% chance that they will not be reached.

Similar to peak demands, to illustrate the uncertainty in the forecasting process, an estimated 80% probability bandwidth was defined around the base or equal probability annual NEL projections for the United States and Canada as shown in Figures 5 and 6, respectively. The bandwidth bounds are defined such that there is an estimated 80% probability that future annual NELs for the United States and Canada will fall within the bounds of their respective bandwidths.

In defining the U.S. NEL bandwidth, regression analysis was used to establish a relationship between annual NEL and key energy-related variables. The established relationship between the variables and NEL was used with high and low estimates of the variables to develop corresponding high and low bounds for the U.S. NEL projections. The upper bound of the bandwidth implies an average annual growth rate of 2.9%, while the lower bound indicates a 1.1% per year rate. There is a 10% chance that annual NEL will exceed the upper bound, and a 10% chance that annual energy needs will be less than the lower bound. The Canada and U.S. NEL bandwidth methodologies are similar except for the energy-related variables. For Canada, the annual NEL bandwidth growth rates are projected to range from 1.1% to 3.9% per year.

It would be incorrect to apply the absolute value or percentage range of the energy forecast bandwidths in Figures 5 and 6 to the annual NEL forecasts of any Region, subregion, group of utilities, or individual utility. The high and low bounds represent a composite of all member systems in each country and apply only to the aggregated projections of NEL for the United States and Canada.

Table 4 — Annual Net Energy for Load (NEL)

1985-1989 Annual NEL — Millions of MWh

Location	1985	1986	1987	1988	1989	Annual Growth (%/year)
United States	2499	2532	2643	2769	2850	3.3
Canada	345	357	375	404	426	5.4

Recent Actual and Forecast Annual NELs — Millions of MWh

Location	1988 Actual	1989 Actual	Change (%)	1989 Forecast	Actual vs Forecast (%)
United States	2769	2850	2.9	2802	1.7
Canada	404	426	5.6	418	1.9

Note: Figures are rounded. Percentages are based on complete data.

Figure 4

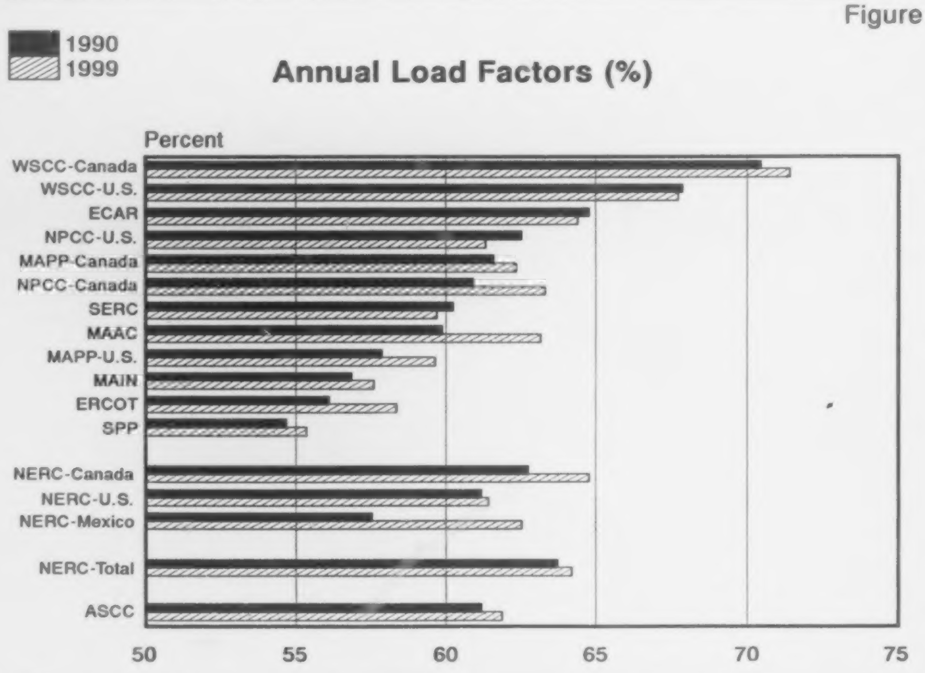


Table 5
Actual and Projected Annual Net Energy for Load[a] – Millions kWh
(1990–1999 Forecast)

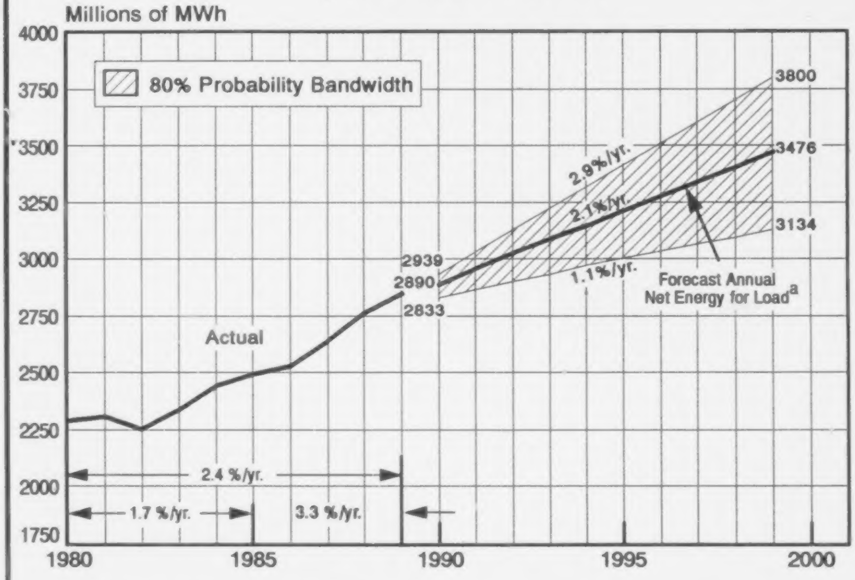
	ACTUAL	PROJECTED										1990–1999 Average Annual Growth
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	(%)
United States												
ECAR	439832	447644	456863	464675	470626	477081	484596	492468	499849	507164	514586	1.6
ERCOT	207304	205819	212854	221175	227236	231673	237270	244485	251514	258569	266642	2.9
MAAC	223922	224159	232405	237931	242790	247484	251799	256201	260530	264728	268956	2.0
MAIN	194535	195145	198701	201986	205410	209134	212965	216954	220983	225087	229193	1.8
Cmnwlth Edison	77412	77400	78300	79850	81450	83100	84750	86450	88200	89950	91750	1.9
East Missouri	33186	33839	34430	34996	35693	36378	36993	37623	38308	39024	39745	1.8
S Cent Illinois	35566	35600	36231	36828	37253	37833	38522	39243	39896	40596	41292	1.7
Wis-Upper Mich	48371	48306	49740	50312	51014	51823	52700	53638	54579	55517	56406	1.7
MAPP	122982	125476	128083	130637	133068	135547	137792	140429	143158	145822	148643	1.9
NPCC	253866	257394	262682	269089	273910	278849	283513	288134	292259	297084	302517	1.8
New York	141884	145210	149340	153220	155260	156980	159020	161140	163290	165700	168070	1.6
NEPOOL	111982	112184	113342	115869	118650	121869	124493	126994	128969	131384	134447	2.0
SERC	623230	641920	661889	679480	698171	716603	736870	755500	774009	792919	810337	2.6
Florida	142959	145997	150842	153297	158092	162590	167585	172229	176684	181239	186034	2.7
Southern	149114	155604	159800	164353	168634	173554	178570	183147	188175	193225	197763	2.7
TVA	118595	124583	128717	131935	135954	140179	144250	147603	150943	154289	157636	2.6
VACAR	212562	215736	222530	229895	235491	240280	246465	252521	258207	264166	268904	2.5
SPP	243805	244330	249593	254077	257898	263404	269262	275221	281129	286972	292820	2.0
Southeast	110638	109482	110984	112196	112806	114258	115819	117722	119922	122121	124442	1.4
West Central	80295	80548	82369	84102	85933	88560	91178	93710	95936	98168	100257	2.5
Northern	52872	54300	56240	57779	59159	60586	62265	63789	65271	66683	68121	2.6
WSCC	540498	547970	558510	571042	581454	590247	600741	612117	621815	632829	642311	1.8
NW Pool	206132	208042	210824	213954	216700	218302	220524	223810	226839	230490	232382	1.2
Rocky Mt Area	38021	38373	39276	40105	40984	41746	42617	43723	44533	45305	46185	2.1
Ariz-N. Mex	61192	63833	65822	68393	70437	72625	74995	76918	78794	80501	82207	2.9
Calif-So. Nev	235153	237722	242588	248590	253333	257574	262605	267666	271649	276533	281537	1.9
TOTAL(U.S.)	2849974	2889857	2961580	3030092	3090563	3150022	3214808	3281509	3345246	3411174	3476005	2.1
Canada												
MAPP	32157	32204	32836	33855	35006	35832	36655	37479	38426	39297	40041	2.4
NPCC	308650	310273	323334	334296	344712	351460	358560	368906	375491	381727	389600	2.6
New Brunswick	12831	13340	13782	14153	14576	15018	15460	15903	16344	16789	17230	2.9
Nova Scotia	8949	9895	10185	10433	10688	10936	11208	11527	11877	12221	12585	2.7
Ontario	140770	142738	146467	151510	154748	158306	161492	166176	168970	171817	174685	2.3
Quebec	146100	144300	152900	158200	164700	167200	170400	175300	178300	180900	185100	2.8
WSCC	85286	89445	92218	95203	98029	100872	103325	105814	108098	110530	112972	2.6
TOTAL(Canada)	426093	431922	448388	463354	477747	488164	498540	512199	522015	531554	542613	2.6
Mexico												
WSCC	4075	4404	4785	5206	5664	6166	6715	7314	7895	8500	9174	8.5
NERC-Total	3280142	3326183	3414753	3498652	3573974	3644352	3720063	3801022	3875156	3951228	4027792	2.1
ASCC	3365	3429	3415	3476	3490	3527	3575	3624	3665	3714	3778	1.1

---

[a] The annual net energy for load (NEL) represents the annual electrical energy needed to serve the electric utility's customers and includes transmission losses. However, it does not include electrical energy pumping (or charging) requirements for pumped storage (or other energy storage) generating facilities.

United States Figure 5

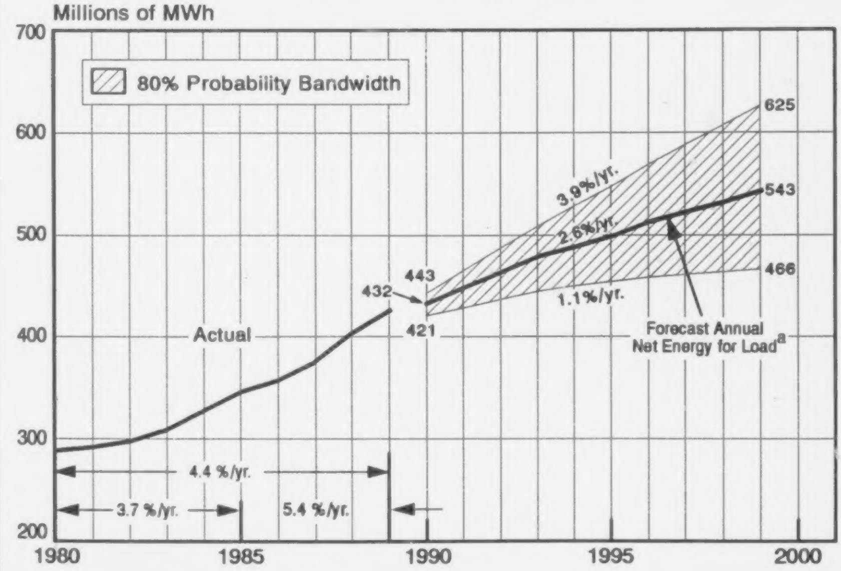
Annual Net Energy for Load
(1990 - 1999 Forecast)



[a] Item 1, line 09, April 1, 1990 IE-411 reports.

Canada Figure 6

Annual Net Energy for Load
(1990 - 1999 Forecast)



[a] Consistent with Item 1, line 09, April 1, 1990 IE-411 reports.

Planned Capacity Resources

1990-1999 Projections

To serve projected demands, U.S. systems are planning to increase their **net** capacity resources by about 89,200 MW (summer) and 87,900 MW (winter) over the 1990-1999 period — corresponding to average annual growth rates of 1.4% (summer) and 1.3% (winter). Capacity resources in Canada are expected to increase by about 19,300 MW (summer) and 18,300 MW (winter) over the same period. These increases correspond to average annual growth rates of 2.3% (summer) and 2.1% (winter). Comparable planned capacity resources and average annual growth rates for the Regions and their subregions are shown in Tables 6 (summer) and 7 (winter). The planned capacity resources in winter are generally greater than those of the previous summer season.

The installed generating capacity included in these planned capacity resources and a breakdown of that generating capacity by fuel are included in the "Installed Generating Capacity" portion of this report. Appendix A also includes the regional distribution of this capacity by fuel for 1989 actual and the 1990-1999 projections.

Planned Capacity Resources

Planned capacity resources include the total dependable utility generating capacity that is existing, presently under construction, or in various stages of planning, non-utility generating capacity, plus scheduled capacity purchases from other utility generation sources, less utility capacity sales to other utilities.

The realization of these capacity resources is contingent upon the completion, as scheduled, of utility and non-utility generating units that are in various stages of planning, design, licensing, or construction.

Estimated Capacity Margins

To adequately supply projected peak demands, planned capacity resources must be somewhat greater than the peak demand. This margin must be sufficiently above demand to assure reliability of supply by providing flexibility for scheduled generating unit maintenance, emergency forced outages of generating units, equipment deratings due to various causes, forecast demand uncertainty, and other system operating requirements.

The amount by which planned capacity resources are projected to exceed the U.S. summer **net** peak demands over the 1990-1999 period ranges from 149,200 MW (1990) to 136,600 MW (1999) — corresponding to summer capacity margins of 22% (1990) and 17.8% (1999). Comparable winter capacity margins in Canada are estimated to range from 15.7% (1990/1991) to 14.6% (1999/2000). The estimated margins for the nine Regions are shown graphically in Figure 7. The estimated capacity margins for the United States, Canada, the Regions, and their subregions are shown in Tables 8 (summer) and 9 (winter).

In calculating capacity margins, the peak demands of Tables 2 (summer) and 3 (winter) were reduced by the total load management and interruptible demand values of Table 2A (summer) and 3A (winter), respectively. It is these adjusted peak demands, or **net** peak demands, for which utilities generally plan capacity resources. The amount by which the planned capacity resources exceeds the projected **net** peak demand is called the margin. Capacity margin in percent is calculated by dividing the margin by total planned capacity resources and multiplying by 100.

Capacity margins vary from Region to Region. This is due to variations in regional characteristics, such as the duration of the peak demand season, the differences in the ages, sizes, and types of generating units, the physical characteristics of the Region and the associated geographical configuration of the electric utility systems, the number and capability of transmission interconnections, and the operating agreements among interconnected systems. However, the margin and capacity margin projections are consistent with the regional IE-411 reports to the U.S. Department of Energy and are included here for convenience.

The margins (megawatts) and the capacity margins (%) are not in themselves sufficient indexes of electric supply adequacy, security, or reliability. The adequacy of the existing and planned capacity resources is assessed and reported in NERC's *1990 Reliability Assessment* report, published in September 1990.

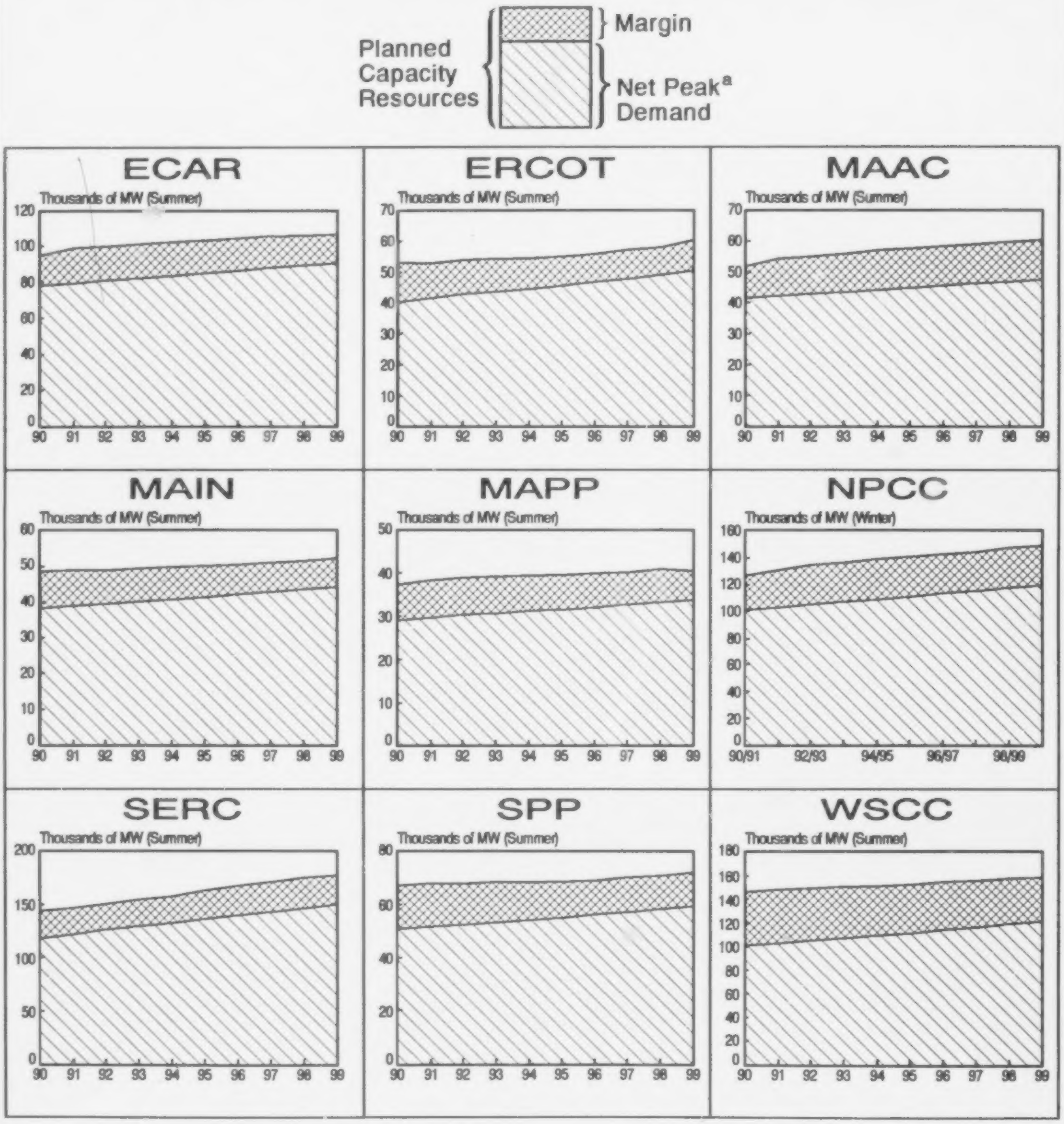
Non-Utility Generators

Non-utility generators (NUGs) are facilities for generating electricity that are not owned exclusively by an electric utility and which operate connected to an electric utility system. Included are qualifying cogeneration and small power production facilities under the Public Utility Regulatory Policies Act (PURPA) of 1978, pre-PURPA non-utility generators, customer-owned generators not covered by PURPA, and industrial or other independent power producers that operate connected to an electric utility system.

In this report, the data on non-utility generators (NUGs) is limited to only those NUGs that sell or are projected to sell electric energy or capacity, or both, to electric utilities.

Figure 7

Estimated Margins at the Time of Regional Peak Demand



[a] Net peak demand is forecast peak demand less load management and interruptible demands.

Table 6
Planned Capacity Resources – Summer[a] – MW

(Utility and Non-Utility Generating Capacity+Scheduled Capacity Purchases-Capacity Sales)

(1990–1999 Forecast)

	PROJECTED										1990-1999 Average Annual Growth
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	(%)
United States											
ECAR	94384	98855	99643	100700	101822	103121	104240	105530	105886	106247	1.3
ERCOT	53108	52672	54020	54292	54492	54870	55982	57295	58048	60206	1.4
MAAC	52057	54182	55124	55843	56948	57630	58420	58955	59553	60397	1.7
MAIN	48522	48933	48983	49358	49771	50130	50439	50970	51319	52146	0.8
Cmnwlth Edison	21867	21832	21812	21792	21972	21972	21972	21972	21972	22412	0.3
East Missouri	7875	8023	8053	8318	8323	8328	8381	8466	8546	8631	1.0
S Cent Illinois	8911	9137	9108	9138	9233	9228	9334	9414	9554	9648	0.9
Wis-Upper Mich	9869	9941	10010	10110	10243	10602	10752	11118	11247	11455	1.7
MAPP	31282	31428	31322	31850	31962	32441	32752	32901	33394	33525	0.8
NPCC	58861	60926	62900	63745	64130	65467	66483	67260	67745	68411	1.7
New York	33062	33523	35401	36555	37293	38419	38919	39266	39266	39266	1.9
NEPOOL	25799	27403	27499	27190	26837	27048	27564	27994	28479	29145	1.4
SERC	144065	146582	150421	154303	157588	163460	167647	171104	175382	177137	2.3
Florida	33347	33807	34053	34440	35297	35867	37159	38225	39274	39602	1.9
Southern	35233	36178	36250	37384	38596	39636	40850	41873	42920	43797	2.4
TVA	27053	27053	28573	29638	29988	32223	32223	32723	33935	34235	2.7
VACAR	48432	49544	51545	52841	53707	55734	57415	58283	59253	59503	2.3
SPP	67340	67708	67961	68370	68413	68551	69212	70220	71021	72150	0.8
Southeast	28403	28370	28106	28301	28192	28068	28393	28672	29094	29684	0.5
West Central	22603	23012	23155	23175	23180	23203	23361	23564	23754	23999	0.7
Northern	16334	16326	16700	16894	17041	17280	17458	17984	18173	18467	1.4
WSCC[b]	127000	127960	129115	130004	130728	131979	133434	134068	135239	135622	0.7
NW Pool	43009	43346	43127	42705	43082	42809	43431	43107	42986	42533	-0.1
Rocky Mt Area	8468	8761	8962	9069	9287	9354	9757	9813	10300	10302	2.2
Ariz-N. Mex	16327	16494	16618	16389	16521	16711	16885	17012	17320	17564	0.8
Calif-So. Nev	60970	61463	62481	63469	63809	64293	65125	65508	66096	66284	0.9
TOTAL(U.S.)	676619	689246	699489	708465	715854	727649	738609	748303	757587	765841	1.4
Canada											
MAPP	6051	6841	7440	7310	7356	7067	7109	7379	7379	7179	1.9
NPCC	61654	63080	66269	68096	70695	71884	72124	73371	74821	77337	2.6
New Brunswick	3129	3089	3265	3449	3945	3865	3865	3865	4305	4405	3.9
Nova Scotia	1972	1972	2122	2122	2302	2317	2417	2417	2582	2582	3.0
Ontario	29323	30249	31258	32388	32516	32932	33129	33333	33413	34249	1.7
Quebec	27230	27770	29624	30137	31932	32770	32713	33756	34521	36101	3.2
WSCC	18420	18716	19368	19368	19368	19668	19852	20039	20365	20927	1.4
TOTAL(Canada)	86125	88637	93077	94774	97419	98619	99085	100789	102565	105443	2.3
Mexico											
WSCC	960	1110	1110	1148	1298	1336	1486	1706	1706	1706	6.6
NERC-Total	763704	778993	793676	804387	814571	827604	839180	850798	861858	872990	1.5
ASCC	1058	1163	1155	1158	1126	1150	1136	1122	1106	1106	0.5

[a] At the time of summer peak demand.

[b] Since the subregional peak demands may occur in different months than the coincident total WSCC–U.S. peak demand, the sum of the subregional resources based on those peak demands may not always equal the WSCC–U.S. total. Also, the sum of the subregional resources does not equal the total WSCC–U.S. resources because in some cases firm capacity transfers have been reported for which either the buying or the selling system has not yet been identified.

Table 7
Planned Capacity Resources - Winter[a] - MW

(Utility and Non-Utility Generating Capacity+Scheduled Capacity Purchases-Capacity Sales)

(1990-1999 Forecast)

	PROJECTED										1990/91-1999/00 Average Annual Growth (%)
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	
United States											
ECAR	98946	100526	101412	103083	104197	105048	106508	107348	107872	109106	1.1
ERCOT	53075	52939	54559	54459	54458	55399	57137	57643	59197	60518	1.5
MAAC	54450	56995	58095	58253	59719	60580	61540	62212	62975	63954	1.8
MAIN	49300	49430	49461	49893	50642	51019	51365	51806	52171	52978	0.8
Cmnwlth Edison	22416	22386	22361	22341	22521	22521	22521	22521	22521	23080	0.3
East Missouri	7685	7788	7818	8096	8406	8411	8464	8549	8629	8714	1.4
S Cent Illinois	9241	9241	9212	9246	9357	9352	9365	9355	9511	9442	0.2
Wis-Upper Mich	9958	10015	10070	10210	10358	10735	11015	11381	11510	11742	1.8
MAPP	31167	31241	31266	32335	32454	32360	32391	32540	33103	33205	0.7
NPCC	60343	61861	62999	63521	64371	65376	66392	67094	67637	68284	1.4
New York	33076	34387	35526	36531	37673	38365	38865	39212	39212	39212	1.9
NEPOOL	27267	27474	27473	26990	26698	27011	27527	27882	28425	29072	0.7
SERC	147218	150780	155392	158649	163176	166920	172022	176288	179626	181029	2.3
Florida	34640	35009	35138	36548	36920	37748	39319	40087	41403	41738	2.1
Southern	35335	36229	37111	37335	38448	39670	40900	42198	42940	43446	2.3
TVA	27305	28475	29890	30240	32475	32475	32975	34187	34487	35699	3.0
VACAR	49938	51067	53253	54526	55333	57027	58828	59816	60796	60146	2.1
SPP	67593	67959	67958	68727	68747	69072	70007	70576	71736	72344	0.8
Southeast	28453	28392	28114	28355	28221	28397	28651	28886	29461	29598	0.4
West Central	22598	23006	22909	23199	23162	23218	23456	23399	23795	23972	0.7
Northern	16542	16561	16935	17173	17364	17457	17900	18291	18480	18774	1.4
WSCC[b]	129566	130129	131619	132523	133772	134766	136082	136888	138139	138173	0.7
NW Pool	47239	47794	48049	48391	48649	48863	48953	49274	49208	48621	0.3
Rocky Mt Area	8700	8873	9019	9114	9373	9458	9856	9933	10420	10422	2.0
Ariz-N. Mex	15777	15476	16607	16607	16513	16720	16894	17021	17323	17473	1.1
Calif-So. Nev	58429	58177	59319	59584	60251	60422	61199	61451	61771	62268	0.7
TOTAL(U.S.)	691658	701860	712761	721443	731536	740540	753444	762395	772456	779591	1.3
Canada											
MAPP	7377	7977	8506	7756	7791	8141	8621	8621	8421	8421	1.5
NPCC	65881	68323	71183	72744	74497	75230	76171	77217	79327	80408	2.2
New Brunswick	3089	3329	3529	4025	3945	3945	3945	4385	4485	4485	4.2
Nova Scotia	1989	2139	2139	2319	2334	2434	2434	2599	2599	2764	3.7
Ontario	30588	31585	32707	32779	33046	33363	33606	33674	34497	34561	1.4
Quebec	30215	31270	32808	33621	35172	35488	36186	36559	37746	38598	2.8
WSCC	17755	18427	18427	18427	18427	18908	19086	19286	19612	20479	1.6
TOTAL(Canada)	91013	94727	98116	98927	100715	102279	103878	105124	107360	109308	2.1
Mexico											
WSCC	968	1118	1137	1156	1325	1344	1714	1714	1714	1714	6.6
NERC-Total	783639	797705	812014	821526	833576	844163	859036	869233	881530	890613	1.4
ASCC	1149	1282	1275	1278	1241	1269	1254	1239	1220	1220	0.7

[a] At the time of winter peak demand.

[b] See footnote b of Table 6.

Table 8
Estimated Capacity Margins[a] – Summer[b] – %(Capacity Resources)
(1990–1999 Forecast)

	PROJECTED									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States										
ECAR	17.4	19.7	18.8	18.5	18.1	17.8	17.4	17.1	16.1	15.1
ERCOT	24.1	21.6	20.7	19.6	18.3	17.1	16.6	16.4	15.5	16.1
MAAC	17.9	19.7	19.7	19.5	20.0	19.8	19.9	19.5	19.4	19.5
MAIN	21.1	20.4	19.2	18.8	18.2	17.4	16.6	16.3	15.3	15.2
Cmnwlth Edison	25.5	24.0	22.3	20.6	19.7	18.1	16.5	14.9	13.1	13.0
East Missouri	13.6	14.2	13.6	15.3	14.3	13.3	13.6	14.1	13.7	13.5
S Cent Illinois	24.0	24.9	23.6	23.2	23.0	21.6	21.2	20.7	20.6	20.1
Wis-Upper Mich	14.6	13.4	13.1	13.6	13.8	15.5	15.4	16.9	16.3	16.5
MAPP	21.6	20.5	19.5	19.6	18.7	18.8	18.4	17.3	17.2	16.2
NPCC	21.7	23.4	24.4	23.9	22.8	23.2	23.3	23.1	22.6	22.0
New York	21.0	20.8	24.1	25.6	26.4	27.7	27.9	27.8	26.9	26.0
NEPOOL	22.5	26.7	24.8	21.5	17.9	16.7	16.7	16.7	16.7	16.7
SERC	17.9	17.1	16.3	16.0	15.9	16.6	16.6	16.3	16.4	15.5
Florida	19.7	19.2	19.2	17.9	18.0	17.2	18.3	18.8	19.0	17.6
Southern	14.8	14.4	11.9	12.3	12.7	12.5	12.8	12.7	12.7	12.6
TVA	20.2	17.4	18.9	19.0	17.1	20.2	18.1	17.2	18.1	16.8
VACAR	16.9	16.2	15.9	15.8	16.1	17.2	17.5	16.8	16.5	15.4
SPP	24.9	23.9	22.8	22.2	20.8	19.4	18.5	18.1	17.6	17.4
Southeast	24.9	23.8	22.1	21.9	20.6	19.1	18.7	18.2	18.1	18.3
West Central	24.8	24.8	23.9	22.9	21.0	19.1	17.8	16.9	16.0	15.3
Northern	24.8	22.7	22.5	21.7	20.7	20.1	19.0	19.7	18.9	18.6
WSCC	30.2	29.4	28.7	27.7	26.7	25.9	25.3	24.4	23.8	22.7
NW Pool	37.1	36.8	35.6	34.1	33.8	32.7	32.7	31.3	30.2	28.7
Rocky Mt Area	26.0	27.0	27.2	27.0	27.3	26.2	27.2	26.5	28.5	27.1
Ariz-N. Mex	28.8	27.7	26.6	23.7	21.8	20.3	19.2	18.0	18.2	17.5
Calif-So. Nev	28.1	27.2	26.7	26.1	25.1	24.0	23.5	22.6	21.8	20.6
TOTAL(U.S.)	22.0	21.9	21.3	20.7	20.1	19.8	19.4	19.0	18.5	17.8
Canada										
MAPP	25.0	30.0	33.9	30.5	29.4	26.4	25.3	26.4	24.9	21.5
NPCC	38.3	37.1	38.9	39.1	40.3	40.2	38.8	38.6	38.8	39.4
New Brunswick	48.6	46.8	48.4	49.5	54.4	52.0	50.6	49.1	52.9	52.7
Nova Scotia	39.3	37.3	40.1	38.4	41.7	40.3	40.9	39.1	41.2	39.3
Ontario	33.8	34.1	34.4	35.5	34.5	34.1	33.0	32.1	31.2	31.8
Quebec	41.9	39.3	42.6	41.8	44.4	44.8	43.1	43.8	44.3	45.1
WSCC	38.3	38.0	38.6	37.0	35.4	35.0	34.2	33.4	33.0	33.3
TOTAL(Canada)	37.3	36.7	38.5	38.0	38.5	38.2	36.9	36.7	36.7	37.0
Mexico										
WSCC	9.0	15.3	7.8	3.9	8.3	3.1	6.4	13.1	7.7	1.8
NERC-Total	23.8	23.6	23.3	22.7	22.2	21.9	21.5	21.0	20.6	20.1
ASCC	57.2	60.0	59.7	59.8	58.1	58.7	57.7	56.7	55.3	54.9

[a] Capacity margin in percent is calculated by dividing the difference between planned capacity resources (Item 3A, line 13, IE–411 reports) and net peak demand (Item 3A, line 06, IE–411 reports) by planned capacity resources and multiplying by 100. Capacity margins vary from Region to Region due to variations in regional characteristics and are not in themselves sufficient indexes of electric supply adequacy, security, or reliability.

[b] At the time of summer peak demand.

Table 9
Estimated Capacity Margins[a] – Winter[b] – %(Capacity Resources)
(1990-1999 Forecast)

	PROJECTED									
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00
United States										
ECAR	25.7	25.5	25.0	25.1	24.8	24.0	23.9	23.3	22.5	22.3
ERCOT	38.3	35.5	35.9	34.0	32.3	31.4	31.5	30.2	29.8	29.2
MAAC	30.5	32.0	31.6	30.3	30.5	30.2	29.9	29.4	29.0	29.0
MAIN	36.5	35.4	34.5	34.0	33.7	33.0	32.3	31.7	30.9	30.7
Cmnwlth Edison	42.5	41.2	39.9	38.6	37.9	36.7	35.5	34.1	32.7	33.0
East Missouri	28.6	27.8	26.3	27.3	28.3	27.0	26.6	26.6	25.8	25.1
S Cent Illinois	39.2	38.2	37.3	36.4	35.8	34.3	33.2	31.8	31.6	29.9
Wis-Upper Mich	26.4	25.9	26.1	26.9	27.1	28.7	29.6	30.9	30.5	31.2
MAPP	33.0	31.8	30.7	32.1	31.4	30.2	29.1	28.2	28.3	27.2
NPCC	26.6	27.6	27.7	27.2	26.9	26.9	27.1	26.8	26.1	25.4
New York	27.7	29.3	30.6	31.7	33.0	33.2	33.3	33.0	32.0	31.0
NEPOOL	25.2	25.4	24.0	21.0	18.5	18.0	18.3	18.0	17.8	17.8
SERC	22.4	22.0	22.2	21.7	21.7	21.5	21.8	21.9	21.5	20.2
Florida	15.7	16.4	14.2	15.0	13.2	12.5	13.7	12.9	13.3	11.6
Southern	31.6	31.1	30.9	29.6	29.8	30.3	30.5	30.9	30.7	29.9
TVA	23.1	23.6	24.5	22.7	25.6	23.8	23.1	24.1	23.1	24.0
VACAR	20.3	18.7	20.1	20.2	19.6	19.9	20.5	20.2	19.6	17.0
SPP	43.2	42.6	41.6	41.0	39.7	38.6	38.0	37.1	36.8	36.0
Southeast	43.1	42.2	41.1	40.7	39.4	38.8	38.2	37.5	37.5	36.5
West Central	42.5	42.4	40.6	39.9	38.0	36.4	35.3	33.5	33.1	32.1
Northern	44.4	43.8	43.6	43.0	42.3	41.2	41.2	41.2	40.6	40.3
WSCC	33.2	32.3	31.8	31.2	30.6	29.8	29.2	28.5	27.9	26.6
NW Pool	25.2	25.3	24.7	24.3	23.8	23.1	22.2	21.7	20.5	18.7
Rocky Mt Area	28.0	27.8	27.4	26.9	27.4	26.1	27.3	26.5	28.5	27.0
Ariz-N. Mex	41.2	38.8	42.0	40.0	37.6	36.4	35.5	34.4	34.4	33.3
Calif-So. Nev	38.8	37.1	36.8	36.4	35.8	34.7	34.1	33.4	32.3	31.6
TOTAL(U.S.)	30.6	30.1	29.7	29.2	28.7	28.1	27.8	27.3	26.8	26.0
Canada										
MAPP	19.1	22.7	25.3	15.6	14.2	16.3	19.5	17.6	14.1	12.9
NPCC	14.4	15.5	16.2	16.7	17.2	16.0	15.2	15.0	15.9	15.3
New Brunswick	15.5	19.2	21.6	29.1	25.5	23.4	21.3	27.3	27.2	25.4
Nova Scotia	14.4	17.8	15.5	19.8	18.2	19.2	16.6	19.4	17.0	19.5
Ontario	21.9	22.1	23.1	21.9	21.0	20.3	18.9	17.9	18.7	17.6
Quebec	6.8	8.3	8.9	10.0	12.6	10.9	11.1	10.5	11.9	11.8
WSCC	18.9	19.1	17.2	14.9	12.9	13.1	11.9	11.0	10.5	12.3
TOTAL(Canada)	15.7	16.8	17.2	16.3	16.2	15.5	15.0	14.5	14.8	14.6
Mexico										
WSCC	37.3	41.0	37.4	33.6	37.0	33.2	44.2	40.7	36.9	33.1
NERC-Total	28.9	28.6	28.2	27.6	27.2	26.5	26.3	25.8	25.3	24.6
ASCC	44.5	50.0	49.6	49.4	47.4	47.9	46.7	45.2	43.7	43.0

[a] See footnote a on Table 8.

[b] At the time of winter peak demand.

Installed Generating Capacity

The installed generating capacity includes those generating units that are existing, presently under construction, in various stages of planning, as well as unit reratings (increases and decreases) and removals. It includes utility generating units and non-utility generators (NUGs) that utilities have reported as generating capacity.

The data on NUGs is limited to only those NUGs that sell or are projected to sell electric energy or capacity, or both, to electric utilities and which are reported as generating capacity or capacity additions by electric utilities in their system plans.

1990-1999 Projections

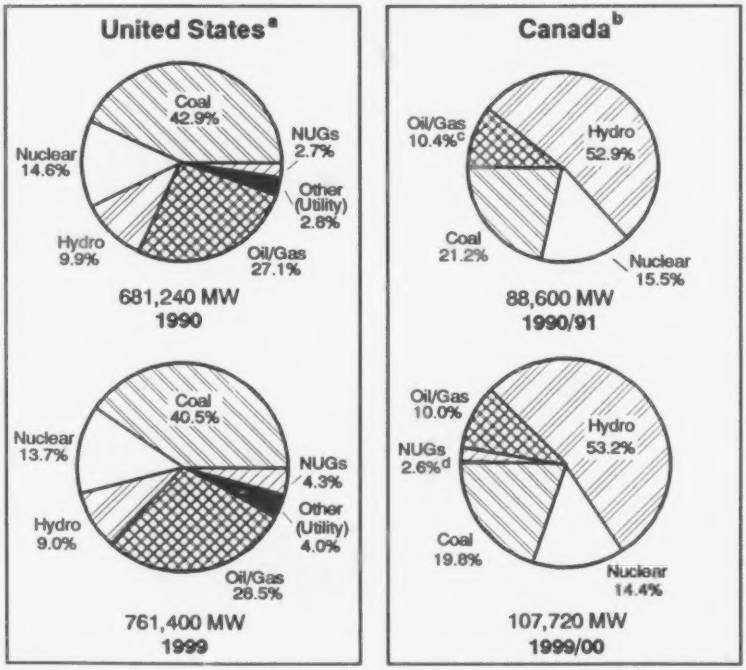
Total installed generating capacity in the United States will increase from 681,200 MW to 761,400 MW (summer) and from 696,400 to 779,000 MW (winter) over the 1990-1999 forecast period. Installed generating capacity in Canada is projected to increase from 85,750 MW to 105,850 MW (summer) and from 88,600 MW to 107,700 MW (winter) over the same period. This data as well as 1989 actual generating capacity for the United States, Canada, the Regions, and their subregions are shown in Tables 11 (summer) and 13 (winter). These generating capabilities correspond with the time of the projected seasonal peak demands shown in Tables 2 (summer) and 3 (winter) and are included in the planned capacity resources of Tables 6 (summer) and 7 (winter).

Summary by Fuel

The 1990 and 1999 projections of total installed generating capacity by fuel for the United States and Canada are shown in Figure 8. The U.S. and Canada generating capacities by fuel in megawatts and in percent of total megawatts are shown in Tables 12 (summer) and 14 (winter) over the forecast period. Similar generating capacities by fuel in megawatts for the nine Regions for the first and tenth years of the forecast are shown in Figure 9. Regional generating capacity on a percentage mix basis by fuel for these same years is summarized in Table 10. A further breakdown of the regional and subregional summer generating capacity totals of Table 11, by fuel, is included in Appendix A.

Figure 8

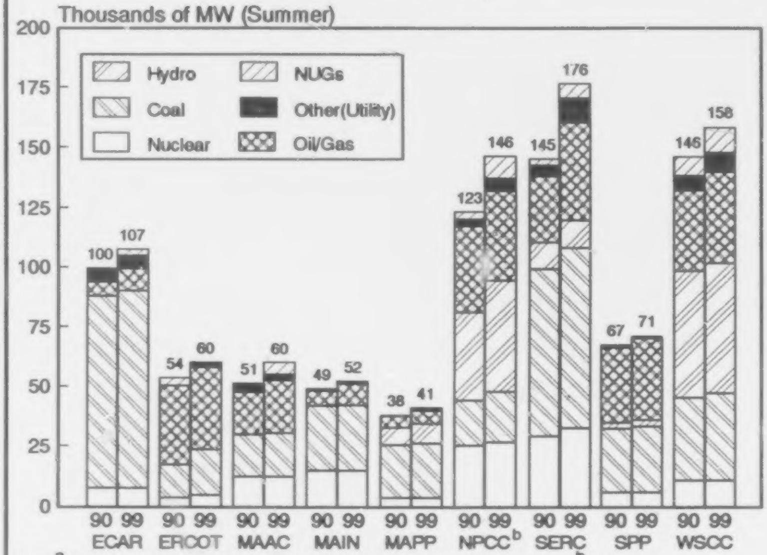
Generating Capacity by Fuel



[a] Summer [b] Winter [c] Includes 0.3% NUGs. [d] Includes 1.0% Other(Utility).

Figure 9

Regional Generating Capacity by Fuel[a] (1990 and 1999)



[a] Capacity of fuel types less than 2400 MW are included in Other(Utility). [b] Winter

Table 10 — Installed Generating Capacity[a] by Fuel (% Total)

	1990						1999					
	Nuclear	Coal	Hydro[b]	Oil/Gas	Other (Utility)	NUGs	Nucl[illegible]	Coal	Hydro[b]	Oil/Gas	Other (Utility)	NUGs
ECAR	7.7	80.7	0.7	6.1	3.6	1.2	7.2	76.8	0.6	8.7	4.4	2.3
ERCOT	6.8	25.9	0.6	61.1	0.0	5.6	8.0	31.5	0.5	57.0	1.6	1.4
MAAC	24.7	33.7	2.1	34.6	2.5	2.4	21.1	30.1	1.8	37.0	2.1	7.9
MAIN	30.3	55.2	1.1	12.8	0.6	<0.1	28.5	52.2	1.1	17.2	0.6	0.4
MAPP-U.S.	11.8	64.2	9.4	12.8	0.4	1.4	11.4	62.6	8.4	14.1	2.2	1.3
NPCC-U.S.	19.4	13.3	9.4	48.9	4.8	4.2	17.1	11.6	8.8	42.8	8.0	11.7
SERC	20.2	48.2	7.8	19.0	3.1	1.7	18.6	42.8	6.4	23.0	5.8	3.4
SPP	8.6	39.5	3.7	46.7	1.3	0.2	8.3	38.8	3.7	47.8	0.6	0.8
WSCC-U.S.	8.5	23.3	33.5	24.3	4.4	6.0	7.9	22.6	31.9	25.4	4.8	7.4
United States	**14.6**	**42.9**	**9.9**	**27.1**	**2.8**	**2.7**	**13.7**	**40.5**	**9.0**	**28.5**	**4.0**	**4.3**
MAPP-Canada	0.0	25.9	66.8	7.3	0.0	0.0	0.0	26.9	66.0	7.1	0.0	0.0
NPCC-Canada	21.7	18.3	49.7	9.8	0.0	0.5	19.7	16.8	52.0	9.9	0.0	1.6
WSCC-Canada	0.0	29.3	58.4	12.3	0.0	0.0	0.0	28.2	52.8	11.6	5.3	2.1
Canada	**15.5**	**21.2**	**52.9**	**10.1**	**0.0**	**0.3**	**14.4**	**19.8**	**53.2**	**10.0**	**1.0**	**1.6**

[a] Summer capabilities, except winter capabilities for Canada.

[b] Conventional hydro. Adverse hydro except for a few systems with median or average hydro.

Table 11
Actual and Projected Installed Generating Capacity[a] – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	97218	99505	101197	101935	102586	103404	104403	105468	106758	107114	107475
ERCOT	51927	53560	53124	54472	54576	54754	55065	56006	57268	57954	60187
MAAC	49829	51194	53573	54511	55308	56410	57092	57882	58417	59015	59859
MAIN	49373	49182	49203	49322	49623	50036	50343	50641	51082	51366	52145
Cmnwlth Edison	21972	21972	21972	21972	21972	21972	21972	21972	21972	21972	22412
East Missouri	8190	8193	8201	8201	8201	8201	8201	8249	8324	8399	8474
S Cent Illinois	9580	9575	9575	9576	9612	9712	9712	9662	9662	9742	9798
Wis-Upper Mich	9631	9442	9455	9573	9838	10151	10458	10758	11124	11253	11461
MAPP	30864	31335	31456	31333	31461	31611	31691	31765	31916	32396	32511
NPCC	54622	57480	58383	60728	61685	62238	63151	63653	64413	64898	65564
New York	32025	32773	33214	35142	36296	36864	37465	37465	37795	37795	37795
NEPOOL	22597	24707	25169	25586	25389	25374	25686	26188	26618	27103	27769
SERC	143325	145047	147554	151313	153951	157511	162418	166585	170107	174535	176370
Florida	30857	30865	31333	31571	32833	33876	34352	35644	36710	37759	38087
Southern	37481	37603	38530	38530	38610	39711	40845	42039	43127	44324	45281
TVA	29596	29596	29596	31116	31116	31466	32636	32636	33136	34348	34648
VACAR	45391	46983	48095	50096	51392	52458	54585	56266	57134	58104	58354
SPP	66625	67460	67835	68038	68367	68432	68624	69180	69839	70437	71235
Southeast	27587	28311	28311	28277	28606	28671	28691	28742	28994	29253	29684
West Central	23426	23508	23818	23934	23934	23934	23994	23994	24068	24203	24288
Northern	15612	15641	15706	15827	15827	15827	15939	16444	16777	16981	17263
WSCC[b]	129533	126478	127523	128678	129567	130321	131472	132927	133781	135078	136058
NW Pool	50042	44519	44685	44832	44622	45140	44763	45267	45012	45012	45012
Rocky Mt Area	9697	9294	9585	9787	9914	10168	10238	10648	10702	11187	11187
Ariz-N. Mex	15873	16415	16417	16515	16544	16596	16593	16717	16844	17154	17298
Calif-So. Nev	53921	55143	55731	56436	56931	57310	58317	59188	59662	60172	61008
TOTAL(U.S.)	673316	681241	689848	700330	707124	714717	724259	734107	743581	752793	761404
Canada											
MAPP	6521	6701	7391	7990	8110	8156	8167	8209	8479	8479	8479
NPCC	55111	60488	62053	65353	67062	69606	71147	72008	73400	74850	77066
New Brunswick	3244	3249	3249	3585	3669	4115	4285	4285	4285	4725	4725
Nova Scotia	1972	1972	1972	2122	2122	2302	2317	2417	2417	2582	2582
Ontario	30036	31115	32051	33018	33990	34073	34401	34598	34802	34882	35518
Quebec	19859	24152	24781	26628	27281	29116	30144	30708	31896	32661	34241
WSCC	17873	18562	18858	19510	19510	19510	19810	19994	20181	20381	20301
TOTAL(Canada)	79505	85751	88302	92853	94682	97272	99124	100211	102060	103710	105846
Mexico											
WSCC	1030	1180	1330	1330	1368	1518	1556	1706	1706	1706	1706
NERC-Total	753851	768172	779480	794513	803174	813507	824939	836024	847347	858209	868956
ASCC	1052	1058	1163	1155	1158	1126	1150	1136	1122	1106	1106

[a] At the time of actual and projected summer peak demand.

[b] Because of subregional peak demand diversities, the sum of the subregional capacities at the time of the respective subregional peak demands may not equal the total WSCC–U.S. capacity.

Table 12
Actual and Projected Installed Generating Capacity by Fuel – Summer
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
United States	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Megawatts (MW)											
Coal	290725	292382	295860	296780	297259	297850	299694	301856	303411	306299	308451
Nuclear	95568	99543	99583	101951	102031	102064	103234	103234	103234	104446	104446
Hydro[a]	71155[b]	67215	67299	67584	67827	67980	68088	68147	68617	68641	68640
Oil[c]	58085	58771	59323	59103	59332	60290	60931	61744	63175	63334	63961
Gas[c]	55552	55628	56633	57656	58819	60282	61532	63507	64967	66512	68354
Dual(Oil/Gas)Fuel[c,d]	68768	70388	70333	70783	71063	72621	75203	77288	79874	81627	84190
Pumped Storage	16002	16179	16981	17507	18053	17854	17905	18839	18849	18850	18840
Geothermal	1866	1807	1814	1814	1814	1814	1814	1814	1814	1814	1814
Other(Utility)	1007	954	965	1403	1448	2490	3664	4601	6268	7882	9699
NUGs[e]	14588	18374	21057	25749	29478	31472	32194	33077	33372	33388	33009
TOTAL(U.S.)	673316	681241	689848	700330	707124	714717	724259	734107	743581	752793	761404
Percent of Total											
Coal	43.2	42.9	42.9	42.4	42.0	41.7	41.4	41.1	40.8	40.7	40.5
Nuclear	14.2	14.6	14.4	14.6	14.4	14.3	14.3	14.1	13.9	13.9	13.7
Hydro	10.6	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0
Oil	8.6	8.6	8.6	8.4	8.4	8.4	8.4	8.4	8.5	8.4	8.4
Gas	8.3	8.2	8.2	8.2	8.3	8.4	8.5	8.7	8.7	8.8	9.0
Dual(Oil/Gas)Fuel	10.2	10.3	10.2	10.1	10.1	10.2	10.4	10.5	10.7	10.8	11.1
Pumped Storage	2.4	2.4	2.5	2.5	2.6	2.5	2.5	2.6	2.5	2.5	2.5
Geothermal	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
Other(Utility)	0.2	0.1	0.1	0.2	0.2	0.4	0.5	0.6	0.8	1.1	1.3
NUGs	2.2	2.7	3.1	3.7	4.2	4.4	4.5	4.5	4.5	4.4	4.3
TOTAL(U.S.)[f]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Canada											
Megawatts (MW)											
Coal	18104	18415	18768	19563	19563	20158	20335	20335	20608	21213	21213
Nuclear	11894	12831	13707	14588	15466	15461	15456	15456	15456	15456	15456
Hydro[a]	41628	45385	46686	48747	48958	50400	51687	52372	53438	54203	56062
Oil[c]	4833	4975	4975	5311	5395	5386	5386	5486	5486	5486	5486
Gas[c]	3007	3921	3834	3950	4401	4800	4805	4835	5070	5070	5061
Dual(Oil/Gas)Fuel[c,d]	0	0	0	0	0	0	0	0	0	0	0
Pumped Storage	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0
Other(Utility)	0	0	0	0	0	0	0	200	400	600	800
NUGs[e]	39	224	332	694	899	1067	1455	1527	1602	1682	1768
TOTAL(Canada)	79505	85751	88302	92853	94682	97272	99124	100211	102060	103710	105846
Percent of Total											
Coal	22.8	21.5	21.3	21.1	20.7	20.7	20.5	20.3	20.2	20.5	20.0
Nuclear	15.0	15.0	15.5	15.7	16.3	15.9	15.6	15.4	15.1	14.9	14.6
Hydro	52.4	52.9	52.9	52.5	51.7	51.8	52.1	52.3	52.4	52.3	53.0
Oil	6.1	5.8	5.6	5.7	5.7	5.5	5.4	5.5	5.4	5.3	5.2
Gas	3.8	4.6	4.3	4.3	4.7	4.9	4.9	4.8	5.0	4.9	4.8
Dual(Oil/Gas)Fuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other(Utility)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.6	0.8
NUGs	0.1	0.3	0.4	0.8	1.0	1.1	1.5	1.5	1.6	1.6	1.7
TOTAL(Canada)[f]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Conventional hydro. Adverse hydro conditions are generally assumed for forecast years by most systems.

[b] Capacity for actual year can be greater than capacity for forecast years if median or average hydro conditions occurred.

[c] Includes steam, combustion turbine (and diesel), and combined cycle units.

[d] Capable of burning oil or gas equally.

[e] Non-utility generators (NUGs).

[f] Totals may not add due to rounding.

Table 13
Actual and Projected Installed Generating Capacity[a] – Winter – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00
United States											
ECAR	99981	101383	102963	103804	104765	105479	106330	107736	108576	109100	109434
ERCOT	52169	53527	53391	54843	54721	54653	55423	57110	57549	59178	60512
MAAC	52336	53844	56386	57482	57718	59181	60042	61002	61674	62437	63416
MAIN	50334	50147	50161	50287	50607	51051	51376	51704	52145	52445	53243
Cmnwlth Edison	22521	22521	22521	22521	22521	22521	22521	22521	22521	22521	23080
East Missouri	8300	8298	8306	8306	8306	8306	8306	8354	8429	8504	8579
S Cent Illinois	9701	9701	9701	9702	9742	9858	9858	9808	9808	9904	9836
Wis-Upper Mich	9812	9627	9633	9758	10038	10366	10691	11021	11387	11516	11748
MAPP	31680	31992	32125	32108	32248	32408	32514	32608	32758	33307	33401
NPCC	56992	60009	61835	63028	63818	64739	65244	65746	66431	66974	67601
New York	33141	34012	35303	36492	37497	38419	38611	38611	38941	38941	38941
NEPOOL	23851	25997	26532	26536	26321	26320	26633	27135	27490	28033	28660
SERC	145909	148225	151752	154819	158297	162034	165878	170960	175291	178884	181162
Florida	31925	32161	32537	33068	34743	35300	36233	37804	38572	39888	40223
Southern	37506	37727	38579	38579	38759	39762	40879	42089	43452	44449	44930
TVA	29848	29848	31018	31368	31718	32888	32888	33388	34600	34900	36112
VACAR	46630	48489	49618	51804	53077	54084	55878	57679	58667	59647	59897
SPP	67194	67805	68168	68371	68748	68785	69089	69793	70424	71044	71522
Southeast	27811	28311	28311	28277	28654	28691	28795	28994	29218	29584	29610
West Central	23502	23584	23894	24010	24010	24010	24070	24070	24144	24194	24364
Northern	15881	15910	15963	16084	16084	16084	16224	16729	17062	17266	17548
WSCC[b]	128654	129453	129811	131301	132235	133492	134386	135922	136728	138060	138736
NW Pool	49452	47966	48074	48188	48396	48525	48633	48768	48834	48844	48844
Rocky Mt Area	9500	9570	9752	9891	10014	10278	10344	10758	10833	11318	11318
Ariz-N. Mex	15776	16433	15898	16616	16618	16656	16653	16777	16904	17206	17352
Calif-So. Nev	52780	55486	55711	56609	57211	58042	58634	59575	60071	60694	61226
TOTAL(U.S.)	685249	696385	706592	716043	723157	731822	740282	752581	761576	771429	779027
Canada											
MAPP	6678	6918	7518	8097	8147	8182	8232	8512	8512	8512	8512
NPCC	59678	63049	65739	68534	70085	71795	73149	74735	75781	77591	78616
New Brunswick	3244	3249	3649	3749	4195	4365	4365	4365	4805	4805	4805
Nova Scotia	1989	1989	2139	2139	2319	2334	2434	2434	2599	2599	2764
Ontario	30474	32404	33354	34313	34385	34519	34836	35079	35147	35770	35834
Quebec	23971	25407	26597	28333	29186	30577	31514	32857	33230	34417	35213
WSCC	18335	18631	19303	19303	19303	19303	19784	19962	20162	20362	20587
TOTAL(Canada)	84691	88598	92560	95934	97535	99280	101165	103209	104455	106465	107715
Mexico											
WSCC	1038	1188	1338	1357	1376	1545	1564	1714	1714	1714	1714
NERC-Total	770978	786171	800490	813334	822068	832647	843011	857504	867745	879608	888456
ASCC	1169	1149	1282	1275	1278	1241	1269	1254	1239	1220	1220

[a] At the time of actual and projected winter peak demand.

[b] See Table 11, footnote b.

Table 14
Actual and Projected Installed Generating Capacity by Fuel – Winter
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
United States	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00
Megawatts (MW)											
Coal	293985	294564	297804	298824	299709	300341	301698	304602	305521	309114	310359
Nuclear	98753	102781	103976	105366	105413	106583	106583	106583	107795	107795	109074
Hydro[a]	67523[b]	66349	66118	66959	67103	67363	67470	67586	67965	67981	67985
Oil[c]	63274	64503	64575	64645	65501	65927	66704	68324	68916	69433	69477
Gas[c]	57136	57535	58628	59681	61409	63108	64546	67102	69177	71028	72966
Dual(Oil/Gas)Fuel[c,d]	70349	71822	71728	72013	72445	73957	76519	78753	81166	83197	85227
Pumped Storage	16382	16606	17221	17753	18005	18069	18119	19077	19077	19077	19077
Geothermal	1823	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830
Other(Utility)	995	1001	1061	1450	1802	2457	3813	5263	6563	8349	9901
NUGs[e]	15029	19394	23651	27522	29940	32187	33000	33461	33566	33625	33131
TOTAL(U.S.)	685249	696385	706592	716043	723157	731822	740282	752581	761576	771429	779027
Percent of Total											
Coal	42.9	42.3	42.2	41.7	41.4	41.0	40.8	40.5	40.1	40.1	39.8
Nuclear	14.4	14.8	14.7	14.7	14.6	14.6	14.4	14.2	14.2	14.0	14.0
Hydro	9.9	9.5	9.4	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7
Oil	9.2	9.3	9.1	9.0	9.1	9.0	9.0	9.1	9.1	9.0	8.9
Gas	8.3	8.3	8.3	8.3	8.5	8.6	8.7	8.9	9.1	9.2	9.4
Dual(Oil/Gas)Fuel	10.3	10.3	10.2	10.1	10.0	10.1	10.3	10.5	10.7	10.8	10.9
Pumped Storage	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Geothermal	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Other(Utility)	0.2	0.1	0.2	0.2	0.3	0.3	0.5	0.7	0.9	1.1	1.3
NUGs	2.2	2.8	3.4	3.8	4.1	4.4	4.5	4.5	4.4	4.4	4.3
TOTAL(U.S.)[f]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Canada											
Megawatts (MW)											
Coal	18540	18798	19354	19573	20168	20345	20345	20625	21230	21230	21335
Nuclear	11899	13707	14588	15466	15461	15456	15456	15456	15456	15456	15456
Hydro[a]	45340	46844	48484	50018	50478	51970	53163	54438	54811	56548	57344
Oil[c]	5182	5193	5593	5693	5684	5684	5784	5784	5784	5784	5784
Gas[c]	3685	3765	3901	4352	4755	4760	4791	5017	5017	5017	5002
Dual(Oil/Gas)Fuel[c,d]	0	0	0	0	0	0	0	0	0	0	0
Pumped Storage	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0
Other(Utility)	0	0	0	0	0	0	200	400	600	800	1100
NUGs[e]	45	291	640	832	989	1065	1426	1489	1557	1630	1694
TOTAL(Canada)	84691	88598	92560	95934	97535	99280	101165	103209	104455	106465	107715
Percent of Total											
Coal	21.9	21.2	20.9	20.4	20.7	20.5	20.1	20.0	20.3	19.9	19.8
Nuclear	14.1	15.5	15.8	16.1	15.9	15.6	15.3	15.0	14.8	14.5	14.4
Hydro	53.5	52.9	52.4	52.1	51.8	52.4	52.6	52.8	52.5	53.1	53.2
Oil	6.1	5.9	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4
Gas	4.4	4.3	4.2	4.5	4.9	4.8	4.7	4.9	4.8	4.7	4.6
Dual(Oil/Gas)Fuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other(Utility)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.6	0.8	1.0
NUGs	0.1	0.3	0.7	0.9	1.0	1.1	1.4	1.4	1.5	1.5	1.6
TOTAL(Canada)[f]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Conventional hydro. Adverse hydro conditions are generally assumed for forecast years by most systems.

[b] Capacity for actual year can be greater than capacity for forecast years if median or average hydro conditions occurred.

[c] Includes steam, combustion turbine (and diesel), and combined cycle units.

[d] Capable of burning oil or gas equally.

[e] Non–utility generators (NUGs).

[f] Totals may not add due to rounding.

Electrical Energy Production

A Region's annual net energy for load (NEL) may be supplied by a combination of internal utility generation and imports (or purchases) from others (utilities and non-utility generators). Figure 10 shows the relationship among electrical energy production, internal generation, and net energy for load.

1990-1999 Projections

Annual electrical energy production in the United States is expected to increase by 19% over the 1990-1999 forecast period. In Canada, the increase will be about 32% over the same period. Details of the U.S., Canadian, regional, and subregional projections for electrical energy production, internal generation, and net electrical energy imports are shown in Tables 16, 17, and 18, respectively.

During 1989, utility generators provided about 97% of the electrical energy production in the United States and non-utility generators (NUGs) about 3%. By 1999, utility generators will provide a decreased percentage, about 93.6%, of total U.S. electrical energy production and NUGs an increased percentage, about 6.4%. In Canada, the amount of total electrical energy production supplied by NUGs will increase from 0.1% in 1989 to 1.9% in 1999.

Summary by Fuel

Coal and nuclear generated electricity is expected to dominate (at 70% or more) electrical energy production in the United States throughout the forecast period. Conventional hydro, coal, and nuclear generation are projected to provide about 94% of Canada's total electrical energy production.

Electrical energy production by fuel for the United States and Canada for 1990 and 1999 is illustrated in Figure 11. Year-by-year percentages for the United States and Canada are shown in Table 19. Electrical energy production in millions of MWh for 1990 and 1999 is shown in Figure 12 for the Regions. Regional production by percentage fuel mix for these same years is summarized in Table 15. Further details on the U.S., Canadian, regional, and subregional electrical energy production by fuel are included in Appendix B.

Figure 10

Regional Electrical Energy Production, Generation, and Net Energy for Load

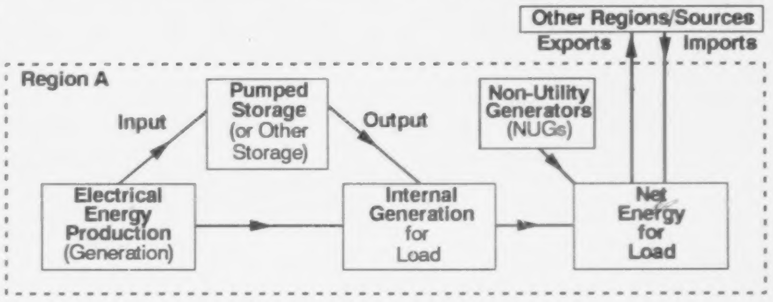
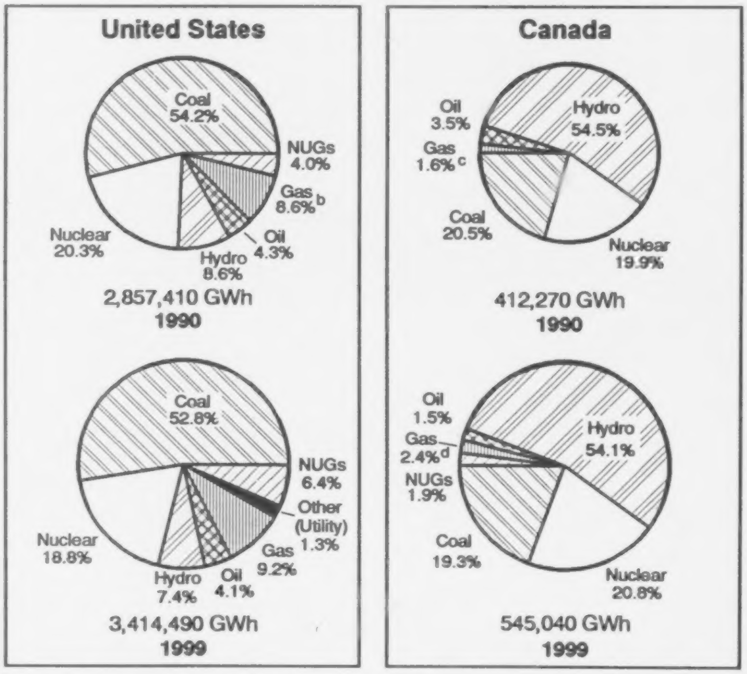

Other Regions/Sources
Exports
Imports
Region A
Pumped Storage (or Other Storage)
Input
Output
Non-Utility Generators (NUGs)
Electrical Energy Production (Generation)
Internal Generation for Load
Net Energy for Load

Figure 11

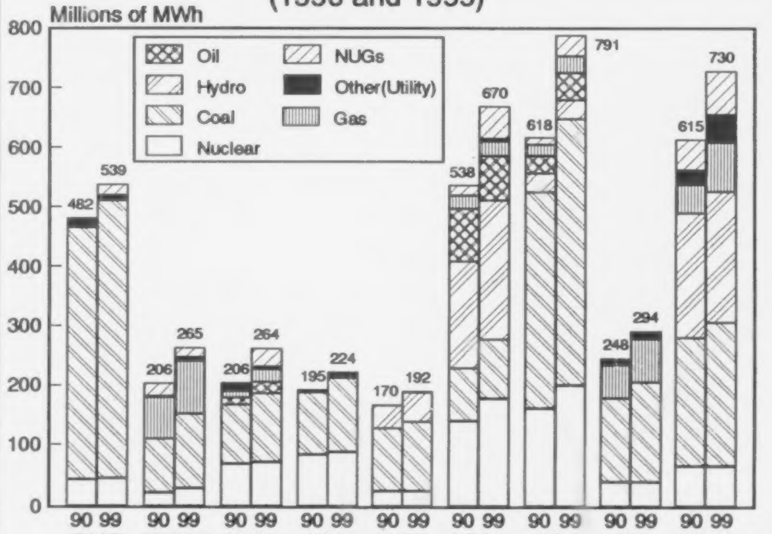
Electrical Energy Production[a] by Fuel



[a] From primary energy sources (pumped storage generation and net imports excluded).
[b] Includes 0.8% Other(Utility).
[c] Includes 0.2% NUGs.
[d] Includes 0.6% Other(Utility).

Figure 12

Regional Electrical Energy Production by Fuel[a]
(1990 and 1999)



[a] Production by fuel types less than 10 million MWh is included in Other(Utility).

Table 15 — Electrical Energy Production by Fuel (% Total)

	1990						1999					
	Nuclear	Coal	Hydro[a]	Oil/Gas	Other (Utility)	NUGs	Nuclear	Coal	Hydro[a]	Oil/Gas	Other (Utility)	NUGs
ECAR	9.2	87.9	0.6	0.8	0.0	1.5	8.6	86.5	0.6	1.1	0.0	3.2
ERCOT	10.6	43.9	0.2	34.2	1.0	10.1	11.3	47.1	0.2	33.8	2.1	5.5
MAAC	34.6	48.3	1.7	10.8	0.6	4.0	28.1	43.5	1.4	15.7	0.3	11.0
MAIN	44.5	54.0	1.0	0.2	0.3	<0.1	40.7	55.6	1.0	1.9	0.2	0.6
MAPP-U.S.	18.9	72.4	7.8	0.5	0.4	<0.1	17.3	72.1	9.2	1.0	0.4	<0.1
NPCC-U.S.	24.1	20.1	11.6	37.8	0.2	6.2	23.2	17.6	10.2	32.1	1.4	15.5
SERC	26.5	58.7	5.2	7.9	0.0	1.7	25.6	56.7	3.9	9.2	0.1	4.5
SPP	16.2	56.9	2.4	23.1	0.1	1.3	13.6	57.6	2.1	24.8	0.1	1.8
WSCC-U.S.	13.0	34.8	30.7	9.0	2.8	9.7	11.0	32.9	26.9	12.6	4.9	11.7
United States	**20.3**	**54.2**	**8.6**	**12.1**	**0.8**	**4.0**	**18.8**	**52.8**	**7.4**	**13.3**	**1.3**	**6.4**
MAPP-Canada	0.0	27.1	70.9	2.0	0.0	0.0	0.0	27.4	71.9	0.7	0.0	0.0
NPCC-Canada	28.8	13.7	52.1	5.1	0.0	0.3	29.4	13.1	53.1	2.1	0.0	2.3
WSCC-Canada	0.0	39.3	55.2	5.5	0.0	0.0	0.0	37.2	50.1	8.6	3.1	1.0
Canada	**19.9**	**20.5**	**54.5**	**4.9**	**0.0**	**0.2**	**20.8**	**19.3**	**54.1**	**3.3**	**0.6**	**1.9**

[a] Conventional hydro. Adverse hydro except for a few systems with median or average hydro.

Table 16
Actual and Projected Electrical Energy Production[a] – Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	475296	481729	483825	495404	498268	502349	507687	516255	523664	530616	539465
ERCOT	206417	205609	212173	219209	225641	229778	235272	241078	248419	256117	264863
MAAC	203689	205970	212334	222598	231043	239164	247056	251441	255547	259807	263938
MAIN	194521	194729	198724	203503	205819	210245	212373	215180	218833	221535	224092
Cmnwlth Edison	84026	79915	81560	83725	84245	85175	86435	87825	89005	90455	91960
East Missouri	32524	33375	33487	33788	34870	35519	35752	36234	37281	37052	37183
S Cent Illinois	34835	36738	38581	38089	37935	39774	39467	39241	39633	39969	39988
Wis-Upper Mich	43136	44701	45096	47901	48769	49777	50719	51880	52914	54059	54961
MAPP	129949	132646	135230	134726	135203	137783	138673	139745	141227	143161	143700
NPCC	243809	252295	257557	262785	266225	270208	271410	273395	275281	279643	284579
New York	139850	146730	150592	153114	154108	155306	154602	153417	154676	157064	159450
NEPOOL	103959	105565	106965	109671	112117	114902	116808	119978	120605	122579	125129
SERC	607730	618372	639116	659554	675260	692366	709772	729442	750969	773900	790709
Florida	119664	124199	129116	131364	137051	141266	144941	150363	158363	167556	172635
Southern	166741	162971	169006	174483	174845	178473	183211	187548	192067	197904	202211
TVA	118916	124151	127096	130874	134807	139358	143830	148024	150950	154281	157616
VACAR	202409	207051	213898	222833	228557	233269	237790	243507	249589	254159	258247
SPP	252027	247535	254427	257766	260169	265305	270028	277622	286412	290359	293591
Southeast	108450	106732	111665	110904	110563	112163	113325	115583	121297	122475	123466
West Central	84968	84564	85018	88241	89468	92091	94720	98393	100021	101463	102707
Northern	58609	56239	57744	58621	60138	61051	61983	63646	65094	66421	67418
WSCC[b]	533140	518529	527726	540865	554323	561292	572256	579489	590065	599967	609552
NW Pool[b]	214623	212747	216394	219358	222974	224806	226035	229792	232470	235475	238724
Rocky Mt Area	43359	42065	42934	43700	44537	45336	46192	46666	47444	48170	49013
Ariz-N. Mex	66852	65995	67859	69536	71109	73728	76590	77810	79701	81318	82891
Calif-So. Nev	208306	197722	200539	208271	215703	217422	223439	225221	230450	235004	238924
TOTAL(U.S.)	2846578	2857414	2921112	2996410	3051951	3108490	3164527	3223647	3290417	3355105	3414489
Canada											
MAPP	34683	36953	41824	42315	43578	43852	44616	44674	44670	46312	48365
NPCC	285525	285418	309244	320051	330381	337948	347057	360870	368955	375074	385696
New Brunswick	16513	16890	15000	14666	15703	17164	19315	19367	19608	20570	21128
Nova Scotia	8872	9895	10185	10433	10688	10936	11208	11527	11877	12221	12585
Ontario	135940	141333	153459	158652	161790	165448	168634	173576	176170	178383	180883
Quebec	124200	117300	130600	136300	142200	144400	147900	156400	161300	163900	171100
WSCC	89678	89901	92528	95513	98339	101182	103635	106124	108408	110466	110978
TOTAL(Canada)	409886	412272	443596	457879	472298	482982	495308	511668	522033	531852	545039
Mexico											
WSCC	5523	6332	6713	7138	7591	8093	8642	8600	7895	8500	9174
NERC-Total	3261987	3276018	3371421	3461427	3531840	3599565	3668477	3743915	3820345	3895457	3968702
ASCC	3365	3429	3415	3476	3490	3527	3575	3624	3665	3714	3778

[a] Total electrical energy production from primary energy sources. Includes pumped storage load and NUGs, but excludes pumped storage generation and net imports.

[b] The U.S. portion of the Northwest Power Pool is projecting an energy deficiency under adverse hydro conditions for 1991 through 1999. Included are imports that would be necessary from systems outside of NWPP (U.S.) ranging from 587 (1991) to 16,155 (1999) millions of kWh.

Table 17
Actual and Projected Utility Internal Generation for Load[a] + NUGs[b] – Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	473974	480085	482378	494034	496828	500871	506128	514614	521987	528667	537752
ERCOT	206417	205609	212173	219209	225641	229778	235272	241078	248419	256117	264863
MAAC	202757	205116	211254	221497	229948	238267	246164	250545	254660	258918	263052
MAIN	194481	194711	198689	203451	205769	210198	212317	215126	218780	221482	224014
Cmnwlth Edison	84026	79915	81560	83725	84245	85175	86435	87825	89005	90455	91960
East Missouri	32484	33357	33452	33736	34820	35472	35696	36180	37228	36999	37105
S Cent Illinois	34835	36738	38581	38089	37935	39774	39467	39241	39633	39969	39988
Wis-Upper Mich	43136	44701	45096	47901	48769	49777	50719	51880	52914	54059	54961
MAPP	129949	132646	135230	134726	135203	137783	138673	139745	141227	143161	143700
NPCC	242456	251596	256765	261968	265404	269442	270963	272884	274810	279173	284080
New York	139111	146569	150475	152956	153968	155182	154479	153299	154589	156949	159319
NEPOOL	103345	105027	106290	109012	111436	114260	116484	119585	120221	122224	124761
SERC	606005	617435	638022	658163	673761	690648	708059	727558	748992	771818	788551
Florida	119664	124199	129116	131364	137051	141266	144941	150363	158363	167556	172635
Southern	166672	162909	168886	174365	174729	178369	183179	187356	191828	197638	201906
TVA	118359	123844	126696	130388	134260	138733	143158	147295	150205	153510	156820
VACAR	201310	206483	213324	222046	227721	232280	236781	242544	248596	253114	257190
SPP	251982	247465	254357	257696	260099	265235	269958	277552	286342	290289	293521
Southeast	108450	106732	111665	110904	110563	112163	113325	115583	121297	122475	123466
West Central	84923	84494	84948	88171	89398	92021	94650	98323	99951	101393	102637
Northern	58609	56239	57744	58621	60138	61051	61983	63646	65094	66421	67418
WSCC	533140	518529	527726	540865	554323	561292	572256	579489	590065	599967	609552
NW Pool	214623	212747	216394	219358	222974	224806	226035	229792	232470	235475	238724
Rocky Mt Area	43315	41972	42808	43624	44456	45211	46067	46537	47313	48050	48898
Ariz-N. Mex	66852	65995	67859	69536	71109	73728	76590	77810	79701	81318	82891
Calif-So. Nev	208350	197815	200665	208347	215784	217547	223564	225350	230581	235124	239039
TOTAL(U.S.)	2841161	2853192	2916594	2991609	3046976	3103514	3159790	3218591	3285282	3349792	3409085
Canada											
MAPP	34683	36953	41824	42315	43578	43852	44616	44674	44670	46312	48365
NPCC	285525	285418	309244	320051	330381	337948	347057	360870	368955	375074	385696
New Brunswick	16513	16890	15000	14666	15703	17164	19315	19367	19608	20570	21128
Nova Scotia	8872	9895	10185	10433	10688	10936	11208	11527	11877	12221	12585
Ontario	135940	141333	153459	158652	161790	165448	168634	173576	176170	178383	180883
Quebec	124200	117300	130600	136300	142200	144400	147900	156400	161300	163900	171100
WSCC	89678	89901	92528	95513	98339	101182	103635	106124	108408	110466	110978
TOTAL(Canada)	409886	412272	443596	457879	472298	482982	495308	511668	522033	531852	545039
Mexico											
WSCC	5523	6332	6713	7138	7591	8093	8642	8600	7895	8500	9174
NERC-Total	3256570	3271796	3366903	3456626	3526865	3594589	3663740	3738859	3815210	3890144	3963298
ASCC	3365	3429	3415	3476	3490	3527	3575	3624	3665	3714	3778

[a] Total electrical energy generated internally to serve customers' demand requirements. Includes pumped storage generation, but excludes pumped storage load.

[b] Non-utility generators (NUGs).

Table 18
Actual and Projected Net Electrical Energy Imports[a] – Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	-34142	-32441	-25515	-29359	-26202	-23790	-21532	-22146	-22138	-21703	-23166
ERCOT	887	210	681	1966	1595	1895	1998	3407	3095	2452	1779
MAAC	21165	19043	21151	16434	12842	9217	5635	5656	5870	5810	5904
MAIN	54	434	12	-1465	-359	-1064	648	1828	2203	3605	5179
Cmnwlth Edison	-6614	-2515	-3260	-3875	-2795	-2075	-1685	-1375	-805	-505	-210
East Missouri	702	482	978	1260	873	906	1297	1443	1080	2025	2640
S Cent Illinois	731	-1138	-2350	-1261	-682	-1941	-945	2	263	627	1304
Wis-Upper Mich	5235	3605	4644	2411	2245	2046	1981	1758	1665	1458	1445
MAPP	-6967	-7170	-7147	-4089	-2135	-2236	-881	684	1931	2661	4943
NPCC	11410	5798	5917	7121	8506	9407	12550	15250	17449	17911	18437
New York	2773	-1359	-1135	264	1292	1798	4541	7841	8701	8751	8751
NEPOOL	8637	7157	7052	6857	7214	7609	8009	7409	8748	9160	9686
SERC	17225	24485	23867	21317	24410	25955	28811	27942	25017	21101	21786
Florida	23295	21798	21726	21933	21041	21324	22644	21866	18321	13683	13399
Southern	-17558	-7305	-9086	-10012	-6095	-4815	-4609	-4209	-3653	-4413	-4143
TVA	236	739	2021	1547	1694	1446	1092	308	738	779	816
VACAR	11252	9253	9206	7849	7770	8000	9684	9977	9611	11052	11714
SPP	-8177	-3135	-4764	-3619	-2201	-1831	-696	-2331	-5213	-3317	-701
Southeast	2188	2750	-681	1292	2243	2095	2494	2139	-1375	-354	976
West Central	-4628	-3946	-2579	-4069	-3465	-3461	-3472	-4613	-4015	-3225	-2380
Northern	-5737	-1939	-1504	-842	-979	-465	282	143	177	262	703
WSCC	7358	29441	30784	30177	27131	28955	28485	32628	31750	32862	32759
NW Pool	-8491	-4705	-5570	-5404	-6274	-6504	-5511	-5982	-5631	-4985	-6342
Rocky Mt Area	-5294	-3599	-3532	-3519	-3472	-3465	-3450	-2814	-2780	-2745	-2713
Ariz-N. Mex	-5660	-2162	-2037	-1143	-672	-1103	-1595	-892	-907	-817	-684
Calif-So. Nev	26803	39907	41923	40243	37549	40027	39041	42316	41068	41409	42498
TOTAL(U.S.)	8813	36665	44986	38483	43587	46508	55018	62918	59964	61382	66920
Canada											
MAPP	-2526	-4749	-8988	-8460	-8572	-8020	-7961	-7195	-6244	-7015	-8324
NPCC	23125	24855	14090	14245	14331	13512	11503	8036	6536	6653	3904
New Brunswick	-3682	-3550	-1218	-513	-1127	-2146	-3855	-3464	-3264	-3781	-3898
Nova Scotia	77	0	0	0	0	0	0	0	0	0	0
Ontario	4830	1405	-6992	-7142	-7042	-7142	-7142	-7400	-7200	-6566	-6198
Quebec	21900	27000	22300	21900	22500	22800	22500	18900	17000	17000	14000
WSCC	-4392	-456	-310	-310	-310	-310	-310	-310	-310	64	1994
TOTAL(Canada)	16207	19650	4792	5475	5449	5182	3232	531	-18	-298	-2426
Mexico											
WSCC	-1448	-1928	-1928	-1932	-1927	-1927	-1927	-1286	0	0	0
NERC-Total	23572	54387	47850	42026	47109	49763	56323	62163	59946	61084	64494
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Net imports are equal to imports less exports.

[b] Although Quebec exports electrical energy [illegible] United States, it also imports electrical energy from Churchill Falls in Labrador (Newfoundland), sometimes becoming a net importer of [illegible] energy. Because Churchill Falls is not a NERC member, this results in NPCC–Canada becoming a net importer in certain years, and reduces [illegible] amount that NERC–Canada as a whole appears to be exporting to the United States.

Table 19
Actual and Projected Electrical Energy Production, Internal Generation, and Net Energy for Load by Fuel – Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
United States	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Millions kWh											
Coal	1545501	1549177	1567851	1599002	1612359	1639784	1663952	1702081	1729119	1765916	1802580
Nuclear	530076	581180	598770	615446	625166	630526	632309	636146	642480	641353	642059
Hydro[a]	261753	246314	247884	250405	250040	250829	252194	252810	252786	252843	252701
Oil	145607	121845	123695	109700	108932	110599	120342	118537	127479	134509	141616
Gas	258478	223734	230043	234753	245836	256850	269164	276273	292100	304244	314546
Geothermal	10620	11190	10545	9991	9705	9189	8999	8521	8330	8025	7795
Other(Utility)[b]	5499	8446	9593	10006	13081	16856	19075	22676	26926	31628	34983
NUGs	89044	115528	132731	167107	186832	193857	198492	206603	211197	216587	218209
Electrical Production[c]	2846578	2857414	2921112	2996410	3051951	3108490	3164527	3223647	3290417	3355105	3414489
Pump.Stor.Load(-)	23332	18172	19290	20566	21219	21537	20556	21825	22152	23035	23425
Pump.Stor.Gen.(+)[d]	17915	13950	14772	15765	16244	16561	15819	16769	17017	17722	18021
Internal Generation[e]	2841161	2853192	2916594	2991609	3046976	3103514	3159790	3218591	3285282	3349792	3409085
Imports-Exports	8813	36665	44986	38483	43587	46508	55018	62918	59964	61382	66920
Net Energy for Load[f]	2849974	2889857	2961580	3030092	3090563	3150022	3214808	3281509	3345246	3411174	3476005
Percent Production											
Coal	54.3	54.2	53.7	53.4	52.8	52.8	52.6	52.8	52.6	52.6	52.8
Nuclear	18.6	20.3	20.5	20.5	20.5	20.3	20.0	19.7	19.5	19.1	18.8
Hydro	9.2	8.6	8.5	8.4	8.2	8.1	8.0	7.8	7.7	7.5	7.4
Oil	5.1	4.3	4.2	3.7	3.6	3.6	3.8	3.7	3.9	4.0	4.2
Gas	9.1	7.8	7.9	7.8	8.1	8.3	8.5	8.6	8.9	9.1	9.2
Geothermal	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Other(Utility)	0.2	0.3	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
NUGs	3.1	4.0	4.5	5.6	6.1	6.2	6.3	6.4	6.4	6.5	6.4
TOTAL(U.S.)[g]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Canada											
Millions kWh											
Coal	85329	84371	88101	87670	89350	91775	96535	99697	104077	109529	105043
Nuclear	75730	82115	91040	99328	103502	108011	107783	109206	107845	106888	113278
Hydro[a]	226291	224576	246711	251319	257471	260477	267025	275998	280965	284855	295154
Oil	12387	14725	10082	9804	9488	7850	8993	9086	9548	8288	8087
Gas	9153	5628	5244	5434	6389	7575	6924	8584	8986	9526	9869
Geothermal	0	0	0	0	0	0	0	0	0	0	0
Other(Utility)	710	45	0	0	20	134	497	1070	1769	2443	3420
NUGs	286	812	2418	4324	6078	7160	7551	8027	8843	10323	10188
Electrical Production[c]	409886	412272	443596	457879	472298	482982	495308	511668	522033	531852	545039
Pump.Stor.Load(-)	0	0	0	0	0	0	0	0	0	0	0
Pump.Stor.Gen.(+)[d]	0	0	0	0	0	0	0	0	0	0	0
Internal Generation[e]	409886	412272	443596	457879	472298	482982	495308	511668	522033	531852	545039
Imports-Exports	16207	19650	4792	5475	5449	5182	3232	531	-18	-298	-2426
Net Energy for Load[f]	426093	431922	448388	463354	477747	488164	498540	512199	522015	531554	542613
Percent Production											
Coal	20.8	20.5	19.9	19.2	18.9	19.0	19.5	19.5	19.9	20.6	19.3
Nuclear	18.5	19.9	20.5	21.7	21.9	22.4	21.8	21.3	20.7	20.1	20.8
Hydro	55.2	54.5	55.6	54.9	54.5	53.9	53.9	53.9	53.8	53.6	54.2
Oil	3.0	3.6	2.3	2.1	2.0	1.6	1.8	1.8	1.8	1.6	1.5
Gas	2.2	1.4	1.2	1.2	1.4	1.6	1.4	1.7	1.7	1.8	1.8
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other(Utility)	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.6
NUGs	0.1	0.2	0.6	0.9	1.3	1.5	1.5	1.6	1.7	1.9	1.9
TOTAL(Canada)[g]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Conventional hydro. Adverse hydro conditions are generally assumed for forecast years by most systems.

[b] Includes the excess of pumped storage generation over pumped storage load in WSCC–U.S.

[c] See Table 16 footnote a.

[d] Excludes the excess of pumped storage generation over pumped storage load in WSCC–U.S.

[e] Electrical energy generated internally to serve customers' demand requirements. Includes pumped storage generation, but excludes pumped storage load. In this case, NUGs are also included.

[f] Total electrical energy required to serve customers' demand requirements. Includes utility internal generation, NUGs, and imports less exports. Same as the net energy for load in Table 5.

[g] Totals may not add due to rounding.

Fossil Fuel Requirements

This section provides a summary of the fossil fuels (coal, oil, and natural gas) used by the electric utilities in 1989 and projected to be used over the 1990-1999 period for electrical energy production. These estimates of coal, oil, and natural gas generally exclude the fuel requirements of non-utility generators.

1990-1999 Projections

Annual coal use for electricity production in the United States is projected to increase by 16.9%, about 128 million tons, over the 1990-1999 period. Annual coal use in Canada over this same period is projected to increase by 22%, or 11 million tons. Coal use by Region and subregion and by coal type is detailed in Tables 20 and 21, respectively.

Annual oil requirements for electrical energy in the United States are projected to increase from about 212 (1990) to 252 (1999) million barrels, or about 19%. In Canada, oil used for electricity is projected to decrease by 43% over the forecast period, from 23.4 (1990) to 13.5 (1999) million barrels per year. Details on expected oil use by Region and subregion and by distillate and residual oil categories are shown in Tables 22 and 23, respectively.

The annual use of natural gas by electric utilities in the United States is projected to increase by about 0.9 trillion cubic feet, or 39% over the forecast period. The 1989 actual use of natural gas for electricity production, however, approached the 1994 projections. In Canada, annual use of natural gas for electricity production is expected to increase substantially, about 73%, over the forecast period. This increase in annual use is about 44 billion cubic feet. Similar to the United States, 1989 actual gas use in Canada at 94.5 billion cubic feet approached the 1997 projected use. Details on natural gas expected requirements by Region and subregion and by firm and interruptible gas categories are included in Tables 24 and 25, respectively.

Utility generated electrical energy by fossil fuels will be supplemented by utility generated electrical energy from nuclear, hydro, geothermal, and other (utility) units as well as from non-utility generators (NUGs). Table 19 in the "Electrical Energy Production" section of this report provides an overview of projected electrical energy production by these various fuels.

Appendix C provides further detail on the electric utilities' fossil fuel requirements by Region and subregion for particular types of coal, oil, and natural gas.

Comparison of Recent Projections

A comparison of the projections for 1998, the last common year of last year's ten-year forecast and the current ten-year forecast, shows that on an absolute magnitude basis the U.S. utilities' fossil fuel requirements are projected to increase by 24.9 million tons of coal and 178 billion cubic feet of natural gas, but decrease by 30 million barrels of oil. In Canada, the projected annual changes for 1998 are increases of 4.5 million barrels of oil and 19.9 billion cubic feet of natural gas, but a slight decrease in coal of 863 thousand tons.

Table 20
Regional Coal Requirements[a] for Electrical Energy Production – 1000s Tons
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	184757	184600	184900	189000	187300	190600	191800	193600	197300	199900	203400
ERCOT	68907	67848	68941	69315	70273	70866	75526	79754	84290	88841	94171
MAAC	42925	39860	40068	41624	41784	41898	43361	43870	43417	44725	45644
MAIN	52149	52655	52914	55260	56739	57847	59252	59681	60919	62126	62373
Cmnwlth Edison	8473	8583	8852	9377	9515	10160	10203	10777	11583	11635	12225
East Missouri	11291	10787	10821	11486	12119	11814	12803	12838	12574	13196	13026
S Cent Illinois	14959	15482	15379	15605	15801	16055	16133	15538	16058	16298	15871
Wis-Upper Mich	17426	17803	17862	18792	19304	19818	20113	20528	20704	20997	21251
MAPP	60928	61734	63312	60697	62470	63450	62539	64271	65076	64953	66275
NPCC	18758	19610	19629	19207	19288	19304	19277	19015	19240	19172	19391
New York	12269	12340	12359	11937	12018	12034	12007	11745	11970	11902	12121
NEPOOL	6489	7270	7270	7270	7270	7270	7270	7270	7270	7270	7270
SERC	142455	147316	149839	154532	157070	159444	161778	169212	171400	180021	183521
Florida	21203	22557	23598	22921	23126	23407	23314	25806	26834	29168	30028
Southern	48660	48160	49906	52249	52526	53651	55306	56968	58504	60907	62068
TVA	32149	36478	36544	37016	37427	37428	36042	37772	36403	38459	38838
VACAR	40443	40121	39791	42346	43991	44958	47116	48666	49659	51487	52587
SPP	83368	85918	88145	90443	91935	94014	95446	98518	99408	100373	101942
Southeast	23045	22733	25312	27074	26817	26719	27441	27988	28111	29164	29061
West Central	32586	34659	33727	34200	34918	36912	37527	39098	39208	38674	39390
Northern	27737	28526	29106	29169	30200	30383	30478	31432	32089	32535	33491
WSCC[b]	104124	97740	98877	99420	101791	102302	103465	104992	105473	106419	108873
NW Pool	41369	42360	42241	42486	43316	42657	42511	43065	42610	42356	43342
Rocky Mt Area	19262	19222	19373	19022	19182	19598	19703	19902	20154	20531	20971
Ariz-N. Mex[b]	26471	21088	22361	23079	24066	24840	25602	26342	26614	27473	27923
Calif-So. Nev	17022	15070	14902	14833	15227	15207	15649	15683	16095	16059	16637
TOTAL(U.S.)[b]	758371	757281	766625	779498	788650	799725	812444	832913	846523	866530	885590
Canada											
MAPP	9321	9306	9306	9602	10355	10532	10576	10994	11979	12079	11891
NPCC	17253	16498	16613	15746	16050	16408	18120	19229	20471	22443	20706
New Brunswick	772	612	557	538	775	1784	2233	2278	2488	3234	3310
Nova Scotia	2361	2750	2938	3143	3730	3799	3546	3621	3770	4019	4158
Ontario	14120	13136	13118	12065	11545	10825	12341	13330	14213	15190	13238
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	24312	25177	26880	27905	28517	28929	29083	29230	29332	29403	29391
TOTAL(Canada)	50886	50981	52799	53253	54922	55869	57779	59453	61782	63925	61988
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[b]	809257	808262	819424	832751	843572	855594	870223	892366	908305	930455	947578
ASCC	270	280	280	280	280	280	280	280	280	280	280

[a] Excludes coal requirements of non-utility generators (NUGs).

[b] Includes coal requirements for the 360 MW Springerville 1 coal-fired non-utility generator in the Arizona-New Mexico Power Area of WSCC-U.S.

Table 21

Coal Requirements[a] for Electrical Energy Production by Type – 1000s Tons

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
Western Lignite[b]	74809	75095	76674	76169	75936	76584	80799	85021	89401	93108	95961
Western Coal [b,d]	251533	248540	252896	255205	263606	267898	270833	277618	280869	284193	291537
Other Coal[b]	247272	249046	252155	259124	261808	264643	269012	276674	278953	289329	294692
TOTAL (U.S.) [c,d]	758371	757281	766625	779498	788650	799725	812444	832913	846523	866530	885590
Canada											
Western Lignite	11073	11107	10291	10589	11304	11508	11776	12412	13493	13532	13119
Western Coal	27435	28722	30222	30769	31267	30476	32083	32830	32932	33003	32991
Other Coal	12378	11152	12286	11895	12351	13885	13920	14211	15357	17390	15878
TOTAL (Canada)	50886	50981	52799	53253	54922	55869	57779	59453	61782	63925	61988

[a] Excludes coal requirements of non-utility generators (NUGs).

[b] Western lignite, western coal, and other coal do not add to the total by the amount of the ECAR coal figures on Table 20.

[c] Includes ECAR coal figures from Table 20.

[d] Includes coal requirements for the 360 MW Springerville 1 coal-fired non-utility generator in the Arizona-New Mexico Power Area of WSCC-U.S.

Table 22
Regional Oil Requirements[a] for Electrical Energy Production – 1000s Barrels
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	4257	7160	6550	5404	5867	6234	6303	7104	7771	8002	7977
ERCOT	3530	1169	1141	1136	1183	1180	1145	1133	1156	1142	1187
MAAC	40464	21035	22053	17503	21565	23980	29671	29259	33450	34797	33423
MAIN	2178	826	1173	1289	1972	1801	2386	2522	3485	3880	5010
Cmnwlth Edison	1636	242	272	388	846	1038	1278	1405	2051	2374	2808
East Missouri	73	101	284	409	633	224	521	490	504	578	1423
S Cent Illinois	340	265	389	396	416	442	488	527	828	825	675
Wis-Upper Mich	129	218	228	96	77	97	99	100	102	103	104
MAPP	928	835	871	847	903	910	951	980	1105	1191	1228
NPCC	127883	125863	119524	101895	97205	94009	99962	96583	103496	104157	114219
New York	67025	68211	66793	50614	43260	37105	40083	33720	38082	35671	41800
NEPOOL	60858	57652	52731	51281	53945	56904	59879	62863	65414	68486	72419
SERC	51698	49376	53373	53628	54446	59492	64154	63904	68948	80143	83590
Florida	43195	41967	44546	45026	45519	50816	53538	49671	56546	63671	65941
Southern	496	435	386	431	445	422	459	549	544	671	753
TVA	590	460	585	679	1045	2063	3438	4426	4729	5414	5548
VACAR	7417	6514	7856	7492	7437	6191	6719	9258	7129	10387	11348
SPP	2470	387	404	462	408	464	595	589	626	643	736
Southeast	2077	61	66	88	64	70	149	98	65	107	176
West Central	132	101	85	85	79	79	79	101	142	143	143
Northern	261	225	253	289	265	315	367	390	419	393	417
WSCC	16701	5687	7384	7124	6052	4970	4665	4927	4740	5206	5082
NW Pool	567	30	1012	1018	1014	1014	1014	1018	1014	1014	1014
Rocky Mt Area	28	26	26	35	35	95	164	181	224	264	302
Ariz-N. Mex	87	386	555	513	501	564	667	790	740	822	924
Calif-So. Nev	16019	5245	5791	5558	4502	3297	2820	2938	2762	3106	2842
TOTAL(U.S.)	250109	212338	212473	189288	189601	193040	209832	207001	224777	239161	252452
Canada											
MAPP	46	52	54	53	55	56	59	59	61	62	61
NPCC	20432	23371	15907	15403	14238	12547	14793	14954	15896	13814	13405
New Brunswick	11218	12984	10204	9700	10342	8394	10019	9884	9392	7765	8358
Nova Scotia	4014	3972	4252	3840	2733	3069	3313	3629	3729	3249	3390
Ontario	2700	2115	1451	1863	1163	1084	1461	1441	2775	2800	1657
Quebec	2500	4300	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	20478	23423	15961	15456	14293	12603	14852	15013	15957	13876	13466
Mexico											
WSCC	2497	3864	4183	4779	5037	5209	6133	6062	4875	5894	7029
NERC-Total	273084	239625	232617	209523	208931	210852	230817	228076	245609	258931	272947
ASCC	188	189	193	199	204	210	215	221	227	235	241

---

[a] Excludes oil requirements of non–utility generators (NUGs).

Table 23
Oil Requirements[a] for Electrical Energy Production by Type – 1000s Barrels
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
Distillate Oil[b]	22541	14730	16372	15040	16036	17196	20243	22430	25272	30112	32264
Distillate Oil-ST	9071	7958	7854	7065	7569	7648	8087	8789	9545	10171	10686
Distillate Oil-CT	11821	5798	7108	6640	7026	8049	10534	11967	13859	17845	19059
Distillate Oil-CC	1649	974	1410	1335	1441	1499	1622	1674	1868	2096	2519
Residual Oil[c]	227568	197608	196101	174248	173565	175844	189589	184571	199505	209049	220188
Residual Oil-ST	227235	197242	195579	173720	173046	175110	188418	183158	197613	206505	217532
Residual Oil-CT	293	348	504	507	498	713	1150	1392	1871	2523	2632
Residual Oil-CC	40	18	18	21	21	21	21	21	21	21	24
Crude Oil-ST	0	0	0	0	0	0	0	0	0	0	0
TOTAL (U.S.)	250109	212338	212473	189288	189601	193040	209832	207001	224777	239161	252452
Canada											
Distillate Oil[b]	3090	5002	825	854	929	831	1484	1380	1551	1227	1214
Distillate Oil-ST	2780	4592	264	280	262	249	281	291	293	302	261
Distillate Oil-CT	310	410	561	574	667	582	1203	1089	1258	925	953
Distillate Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Residual Oil[c]	17388	18421	15136	14602	13364	11772	13368	13633	14406	12649	12252
Residual Oil-ST	17388	18421	15136	14602	13364	11772	13368	13633	14406	12649	12252
Residual Oil-CT	0	0	0	0	0	0	0	0	0	0	0
Residual Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Crude Oil-ST	490	70	0	0	0	0	0	0	0	0	0
TOTAL (Canada)	20968	23493	15961	15456	14293	12603	14852	15013	15957	13876	13466
Mexico											
Distillate Oil[b]	92	720	0	0	0	0	0	0	0	0	0
Distillate Oil-ST	0	0	0	0	0	0	0	0	0	0	0
Distillate Oil-CT	92	720	0	0	0	0	0	0	0	0	0
Distillate Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Residual Oil[c]	2405	3144	4183	4779	5037	5209	6133	6062	4875	5894	7029
Residual Oil-ST	2405	3144	4183	4779	5037	5209	6133	6062	4875	5894	7029
Residual Oil-CT	0	0	0	0	0	0	0	0	0	0	0
Residual Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Crude Oil-ST	0	0	0	0	0	0	0	0	0	0	0
TOTAL (Mexico)	2497	3864	4183	4779	5037	5209	6133	6062	4875	5894	7029
NERC-Total											
Distillate Oil[b]	25723	20452	17197	15894	16965	18027	21727	23810	26823	31339	33478
Distillate Oil-ST	11851	12550	8118	7345	7831	7897	8368	9080	9838	10473	10947
Distillate Oil-CT	12223	6928	7669	7214	7693	8631	11737	13056	15117	18770	20012
Distillate Oil-CC	1649	974	1410	1335	1441	1499	1622	1674	1868	2096	2519
Residual Oil[c]	247361	219173	215420	193629	191966	192825	209090	204266	218786	227592	239469
Residual Oil-ST	247028	218807	214898	193101	191447	192091	207919	202853	216894	225048	236813
Residual Oil-CT	293	348	504	507	498	713	1150	1392	1871	2523	2632
Residual Oil-CC	40	18	18	21	21	21	21	21	21	21	24
Crude Oil-ST	490	70	0	0	0	0	0	0	0	0	0
NERC-Total	273574	239695	232617	209523	208931	210852	230817	228076	245609	258931	272947

[a] Excludes oil requirements of non-utility generators (NUGs).

[b] Includes No.1 and No.2 fuel oil, kerosene, and jet fuel. Also includes amounts used at coal-burning plants for startup and flame stabilization.

[c] Includes No.4, No.5, and No.6 fuel oil.

Table 24
Regional Natural Gas Requirements[a] for Electrical Energy Production – 1000 MCF[b]
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	5053	7124	7149	7097	6623	9771	11282	17973	24168	17004	20953
ERCOT	804339	722935	769704	760201	816059	845477	871763	858335	876685	889716	890035
MAAC	91329	134185	133844	133230	148051	156216	188588	194138	232648	235820	258828
MAIN	7494	2585	3593	3878	4891	5196	6268	8271	11000	11522	13385
Cmnwlth Edison	4233	26	54	93	253	362	535	565	1019	1328	2167
East Missouri	371	75	131	131	131	131	131	131	131	131	131
S Cent Illinois	1061	469	894	846	941	1021	1336	1901	3001	3121	2649
Wis-Upper Mich	1829	2015	2514	2808	3566	3682	4266	5674	6849	6942	8438
MAPP	5785	8038	8192	8567	9115	9830	11168	15119	16912	16374	18747
NPCC	230411	216136	217951	218101	237136	238245	235949	238092	242404	247262	249981
New York	180369	174666	177090	178350	195336	194140	189540	189380	191717	194187	193856
NEPOOL	50042	41470	40861	39751	41800	44105	46409	48712	50687	53075	56125
SERC	207853	202227	199471	204858	210371	218696	236394	241331	251195	268619	282940
Florida	184212	177014	177811	178397	180350	185023	194373	194023	201056	205682	206578
Southern	20203	16744	11626	10394	10527	15256	20710	22659	27915	36050	47353
TVA	156	79	364	1076	1055	1506	2653	2756	2754	3259	3084
VACAR	3282	8390	9670	14991	18439	16911	18658	21893	19470	23628	25925
SPP	638042	587459	564739	578360	563843	573543	605933	643917	675072	720263	748766
Southeast	390606	360990	344439	339751	320025	322603	341517	360054	374576	400408	422963
West Central	231721	211219	202678	224759	221847	223912	237178	247683	262855	285234	286811
Northern	15715	15250	17622	13850	21971	27028	27238	36180	37641	34621	38992
WSCC	645057	455452	487982	531883	561328	611326	621983	643095	699913	737560	761173
NW Pool	36093	64312	78331	80493	79543	79980	78443	79605	80418	85343	85231
Rocky Mt Area	8710	3269	3080	3006	3643	2953	2908	2919	6808	7319	7943
Ariz-N. Mex	86885	44140	50323	42971	51477	58961	67006	65156	79135	78225	88994
Calif-So. Nev	513369	343731	356248	405413	426665	469432	473626	495415	533552	566673	579005
TOTAL(U.S.)	2635363	2336141	2392625	2446175	2557417	2668300	2789328	2860271	3029997	3144140	3244808
Canada											
MAPP	9349	9349	9347	8491	4554	5514	5832	6014	3388	4098	4591
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	85154	51106	45794	48264	61816	73870	68424	84816	91294	96580	99863
TOTAL(Canada)	94503	60455	55141	56755	66370	79384	74256	90830	94682	100678	104454
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	2729866	2396596	2447766	2502930	2623787	2747684	2863584	2951101	3124679	3244818	3349262
ASCC	32684	31950	30329	27393	28587	28272	29113	29876	29930	31559	34118

---

[a] Excludes natural gas requirements or non-utility generators (NUGs).

[b] MCF means thousands of cubic feet. Therefore, 1000 MCF is equivalent to one (1) million cubic feet.

Table 25
Natural Gas Requirements[a] for Electrical Energy Production by Type – 1000 MCF[b]
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
Firm Natural Gas	1847179	1601818	1643026	1712376	1774260	1854656	1891401	1907673	1985488	2072330	2106780
Firm Nat.Gas-ST	1726121	1510333	1540718	1608214	1658640	1726591	1729799	1719922	1780121	1839434	1846586
Firm Nat.Gas-CT	12719	13071	15556	14538	15354	17076	21235	21122	28190	38839	46656
Firm Nat.Gas-CC	108339	78414	86752	89624	100266	110989	140367	166629	177177	194057	213538
Inter. Natural Gas	788184	734323	749599	733799	783157	813644	897927	952598	1044509	1071810	1138028
Inter.Nat.Gas-ST	691076	597721	593872	585796	583101	595266	632356	660932	694062	702380	728868
Inter.Nat.Gas-CT	47501	67736	78527	73666	82514	90897	117339	127096	153768	155280	168907
Inter.Nat.Gas-CC	49607	68866	77200	74337	117542	127481	148232	164570	196679	214150	240253
TOTAL (U.S.)	2635363	2336141	2392625	2446175	2557417	2668300	2789328	2860271	3029997	3144140	3244808
Canada											
Firm Natural Gas	54914	43065	30160	28633	34500	47386	54713	59745	61252	66849	70209
Firm Nat.Gas-ST	44788	35037	23315	21882	28385	38391	43450	47755	50517	54188	57445
Firm Nat.Gas-CT	10126	8028	6845	6751	6115	8995	11263	11990	10735	12661	12764
Firm Nat.Gas-CC	0	0	0	0	0	0	0	0	0	0	0
Inter. Natural Gas	39589	17390	24981	28122	31870	31998	19543	31085	33430	33829	34245
Inter.Nat.Gas-ST	39589	17390	24655	27292	30410	30412	17464	28554	30416	30416	30412
Inter.Nat.Gas-CT	0	0	326	830	1460	1586	2079	2531	3014	3413	3833
Inter.Nat.Gas-CC	0	0	0	0	0	0	0	0	0	0	0
TOTAL (Canada)	94503	60455	55141	56755	66370	79384	74256	90830	94682	100678	104454

---

[a] Excludes natural gas requirements of non–utility generators (NUGs).

[b] MCF means thousands of cubic feet. Therefore, 1000 MCF is equivalent to one (1) million cubic feet.

Planned Generating Unit Changes

This section summarizes the planned utility and non-utility generating unit additions and retirements over the January 1, 1990 to December 31, 1999 forecast period.

1990-1999 Projections

Planned generating capacity additions for the United States over the forecast period total 86,200 MW. Of this total, about 67,900 MW or 78.8% will be utility capacity. The other 21.2% will be non-utility generators (NUGs). Planned U.S. retirements during this period will approach 3,900 MW. A summary of the generating unit additions, changes, and retirements for the United States and Canada is shown in Table 26.

About 56,100 MW or 52% of the total planned additions in the United States and Canada consist of utility units that are not yet under construction. In addition, 87% of the NUG capacity is not reported to be under construction. The construction status of the projected generating unit additions is summarized in Table 27.

The projected (utility and non-utility) generating unit additions by Region and subregion are tabulated in Table 28. A listing of these additions by in-service date is included in Appendix D. Appendix M lists those units identified by utilities as jointly-owned units.

The projected 20,000 MW of NUG capacity additions are shown by Region and subregion in Table 30. Details on these NUG units are included in Appendix L.

The 4,200 MW of planned unit retirements by Region and subregion are summarized in Table 31 and listed by retirement date in Appendix N.

Summary by Fuel

Planned generating unit additions by fuel for the United States, Canada, the Regions, and their subregions are summarized in Table 29. Detailed listings of the utility additions by in-service date and fuel are included in Appendixes E through K.

The specific codes and abbreviations used in the generating unit Appendixes D through N are listed in Appendix O. The regional and subregional abbreviations also used in Appendixes D through N as well as throughout this report are defined in Appendix P.

Table 26 — Generating Unit Additions, Changes, and Retirements (1990-1999 Forecast)

	United States		Canada		NERC-Total	
Type	Thousands of MW	% of Total	Thousands of MW	% of Total	Thousands of MW	% of Total
Coal	13.4	15.6	3.0	13.8	16.4	15.1
Nuclear	9.3[a]	10.8	3.5	16.0	12.8[a]	11.8
Hydro	1.3	1.5	10.9	49.3	12.2	11.2
Oil/Gas	28.9	33.5	1.8	8.1	31.3[b]	28.7
Pumped Storage	2.4	2.7	0.0	0.0	2.4	2.2
Other (Utility)[c]	12.6	14.7	1.1	5.0	13.8[b]	12.7
NUGs	18.3	21.2	1.7	7.8	20.0	18.3
Additions	86.2	100.0	22.0	100.0	108.9[b]	100.0
Changes[d]	11.4	—	0.6	—	12.0	—
Retirements	3.9	—	0.3	—	4.2	—
Net Total	93.7	—	22.3	—	116.7[b]	—

Note: Figures are rounded. Percentages are based on complete data.

[a] Perry 2 and Washington Nuclear Project units, WNP 1 and 3, are not included.

[b] Includes 600 MW of oil-fired and 76 MW of geothermal additions in WSCC-Mexico.

[c] Includes utility capacity fueled by geothermal, wind, solar, wood, refuse, and similar energy sources and capacity of unspecified fuel type.

[d] Includes unit rerates, shutdowns, and reactivations from shutdown status.

Table 27 — Construction Status of Generating Unit Additions (1990-1999)

	United States		Canada	
	Thousands of MW	% of Total MW	Thousands of MW	% of Total MW
Nuclear[a]				
Not Yet Under Construction[b]	0.0	0.0	0.0	0.0
Under Construction (<50%)	0.0	0.0	0.9	25.0
Under Construction (>50%)	9.3	100.0	2.6	75.0
Total Nuclear	**9.3**	**100.0**	**3.5**	**100.0**
Coal				
Not Yet Under Construction[b]	6.9	51.5	1.2	39.9
Under Construction (<50%)	3.1	22.9	0.7	24.9
Under Construction (>50%)	3.4	25.6	1.1	35.2
Total Coal	**13.4**	**100.0**	**3.0**	**100.0**
Hydro[c]				
Not Yet Under Construction[b]	0.8	64.3	4.8	43.9
Under Construction (<50%)	0.2	16.2	3.7	33.8
Under Construction (>50%)	0.3	19.5	2.4	22.3
Total Hydro	**1.3**	**100.0**	**10.9**	**100.0**
Oil/Gas				
Not Yet Under Construction[b]	26.9	93.0	1.8	100.0
Under Construction (<50%)	1.5	5.1	0.0	0.0
Under Construction (>50%)	0.5	1.9	0.0	0.0
Total Oil/Gas	**28.9**	**100.0**	**1.8**	**100.0**
Other (Utility)[d]				
Not Yet Under Construction[b]	12.6	83.6	1.1	100.0
Under Construction (<50%)	2.3	15.9	0.0	0.0
Under Construction (>50%)	0.1	0.5	0.0	0.0
Total Other (Utility)	**15.0**	**100.0**	**1.1**	**100.0**
Non-Utility Generators (NUGs)				
Not Yet Under Construction[e]	15.9	87.0	1.5	87.9
Under Construction (<50%)	1.3	6.9	0.0	0.0
Under Construction (>50%)	1.1	6.1	0.2	12.1
Total NUGs	**18.3**	**100.0**	**1.7**	**100.0**
Total (All Units)				
Not Yet Under Construction	63.1	73.2	10.4	47.1
Under Construction (<50%)	8.4	9.8	5.3	24.1
Under Construction (>50%)	14.7	17.0	6.3	28.8
Total (All Units)	**86.2**	**100.0**	**22.0**	**100.0**

Note: Figures are rounded. Percentages are based on complete data.

[a] Perry 2 and Washington Nuclear Project units, WNP 1 and 3, are in some stage of construction but are not included.

[b] Includes utility units planned but not utility authorized, units with regulatory approval pending, and units with regulatory approval received but not yet under construction.

[c] Does not include pumped storage.

[d] Includes utility capacity fueled by geothermal, wind, solar, wood, refuse, and similar energy sources and capacity of unspecified fuel type.

[e] Most NUG units are not reported to be under construction.

Table 28
Total Generating Unit Additions (Utility and Non-Utility) - Summer - MW
(January 1, 1990 - December 31, 1999)

	PROJECTED										1990-1999
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total
United States											
ECAR	925	1978	869	334	271	1282	1051	609	462	415	8196
ERCOT	1415	48	1348	-121	-222	1163	2143	873	1884	1233	9764
MAAC	1586	2113	1093	435	1337	649	785	531	814	951	10294
MAIN	3	38	125	264	400	304	300	429	338	779	2980
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	440	440
East Missouri	0	0	0	0	0	0	0	75	75	75	225
S Cent Illinois	0	0	0	36	100	0	0	0	80	56	272
Wis-Upper Mich	3	38	125	228	300	304	300	354	183	208	2043
MAPP	0	79	19	50	100	80	70	150	480	80	1108
NPCC	2146	1723	1500	1069	924	897	710	760	543	699	10971
New York	236	1296	1136	1005	923	192	0	330	0	0	5118
NEPOOL	1910	427	364	64	1	705	710	430	543	699	5853
SERC	1512	3634	2498	2017	3665	3889	4262	3596	3547	2703	31323
Florida	19	113	489	858	515	888	1145	746	1170	284	6227
Southern	75	852	0	80	1088	1134	1210	1088	1197	957	7681
TVA	0	1170	350	350	1170	0	500	1212	300	1212	6264
VACAR	1418	1499	1659	729	892	1867	1407	550	880	250	11151
SPP	123	322	121	0	17	314	392	225	272	552	2338
Southeast	20	10	0	0	17	0	0	0	0	100	147
West Central	62	300	0	0	0	60	0	0	135	170	727
Northern	41	12	121	0	0	254	392	225	137	282	1464
WSCC	1887	683	686	856	778	944	1059	564	1171	600	9228
NW Pool	110	141	106	41	42	35	0	165	0	0	640
Rocky Mt Area	53	91	135	122	254	70	410	54	485	0	1674
Ariz-N. Mex	374	22	0	0	47	0	74	4	302	144	967
Calif-So. Nev	1350	429	445	693	435	839	575	341	384	456	5947
TOTAL(U.S.)	9597	10618	8259	4904	7270	9522	10772	7737	9511	8012	86202[a]
Canada											
MAPP	0	600	640	46	35	46	273	0	0	0	1640
NPCC	2509	2568	2566	1599	1837	1383	1585	1043	1807	1036	17933
New Brunswick	0	336	84	465	170	0	0	440	0	0	1495
Nova Scotia	0	150	0	180	15	100	0	165	0	165	775
Ontario	1911	940	967	91	139	329	252	75	630	86	5420
Quebec	598	1142	1515	863	1513	954	1333	363	1177	785	10243
WSCC	383	652	0	0	0	500	200	200	200	300	2435
TOTAL(Canada)	2892	3820	3206	1645	1872	1929	2058	1243	2007	1336	22008[a]
Mexico											
WSCC	150	150	0	38	150	38	150	0	0	0	676
NERC-Total	12639	14588	11465	6587	9292	11489	12980	8980	11518	9348	108886[a]
ASCC	0	108	0	6	0	0	0	0	0	0	114

---

[a] Totals may not add due to rounding.

Table 29
Total Generating Unit Additions (Utility and Non–Utility) by Fuel – Summer – MW
(January 1, 1990 – December 31, 1999)

	UTILITY								Non–Utility Generators (NUGs)	Utility & Non–Utility Total
	Coal	Nuclear	Hydro	Oil	Gas	Pumped Storage	Other	Total		
United States										
ECAR	2115	0	5	650	2643	0	510	5923	2273	8196
ERCOT	4830	2300	0	0	2469	0	2310	11909	-2145	9764
MAAC	790	1055	0	283	4357	0	200	6685	3608	10293
MAIN	118	0	7	280	2011	0	404	2820	160	2980
Cmnwlth Edison	0	0	0	40	0	0	400	440	0	440
East Missouri	0	0	0	225	0	0	0	225	0	225
S Cent Illinois	20	0	0	0	252	0	0	272	0	272
Wis-Upper Mich	98	0	7	15	1759	0	4	1883	160	2043
MAPP	0	0	0	328	180	0	600	1108	0	1108
NPCC	0	1150	491	9	1070	0	2460	5180	5789	10969
New York	0	0	397	0	0	0	0	397	4719	5116
NEPOOL	0	1150	94	9	1070	0	2460	4783	1070	5853
SERC	4075	4764	28	2929	8033	2212	4982	27023	4300	31323
Florida	1996	0	0	1381	1572	0	62	5011	1216	6227
Southern	792	0	0	0	5811	998	80	7681	0	7681
TVA	0	4764	0	0	0	0	1500	6264	0	6264
VACAR	1287	0	28	1548	650	1214	3340	8067	3084	11151
SPP	300	0	42	33	1221	0	230	1826	512	2338
Southeast	0	0	17	0	120	0	10	147	0	147
West Central	0	0	25	0	250	0	0	275	452	727
Northern	300	0	0	33	851	0	220	1404	60	1464
WSCC	1220	0	715	280	2118	159	982	5474	3754	9228
NW Pool	0	0	89	0	0	0	45	134	506	640
Rocky Mt Area	485	0	37	0	424	64	0	1010	664	1674
Ariz-N. Mex	360	0	36	0	490	45	10	941	26	967
Calif-So. Nev	375	0	553	280	1204	50	927	3389	2558	5947
TOTAL(U.S.)	13448	9269	1288	4792	24102	2371	12678	67948[a]	18251[a]	86199[a]
Canada										
MAPP	553	0	995	0	92	0	0	1640	0	1640
NPCC	1695	3524	9866	1564	0	0	0	16649	1284	17933
New Brunswick	1050	0	0	420	0	0	0	1470	25	1495
Nova Scotia	645	0	0	100	0	0	0	745	30	775
Ontario	0	3524	1057	0	0	0	0	4581	839	5420
Quebec	0	0	8809	1044	0	0	0	9853	390	10243
WSCC	789	0	0	0	116	0	1100	2005	430	2435
TOTAL(Canada)	3037	3524	10861	1564	208	0	1100	20294[a]	1714[a]	22008[a]
Mexico										
WSCC	0	0	0	600	0	0	76	676	0	676
NERC-Total	16485	12793	12149	6956	24310	2371	13854	88918[a]	19965[a]	108883[a]
ASCC	0	0	108	6	0	0	0	114	0	114

[a] Totals may not add due to rounding.

Table 30
Non-Utility Generator (NUG) Additions[a] - Summer - MW
(January 1, 1990 - December 31, 1999)

	PROJECTED										1990-1999
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total
United States											
ECAR	925	98	483	127	114	442	5	69	5	5	2273
ERCOT	-223	-100	-300	-225	-325	-347	0	0	-136	-489	-2145
MAAC	371	873	966	295	937	49	112	0	6	0	3609
MAIN	0	0	35	0	0	0	0	54	44	27	160
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	35	0	0	0	0	54	44	27	160
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	703	1489	1478	1047	882	192	0	0	0	0	5791
New York	224	1296	1136	991	881	192	0	0	0	0	4720
NEPOOL	479	193	342	56	1	0	0	0	0	0	1071
SERC	922	1325	959	375	217	383	68	37	15	0	4301
Florida	19	69	172	374	80	383	68	37	15	0	1217
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	903	1256	787	1	137	0	0	0	0	0	3084
SPP	52	300	30	0	0	0	30	0	100	0	512
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	52	300	0	0	0	0	0	0	100	0	452
Northern	0	0	30	0	0	0	30	0	0	0	60
WSCC	1273	488	397	614	265	372	141	176	21	7	3754
NW Pool	70	131	80	30	0	30	0	165	0	0	506
Rocky Mt Area	53	69	120	122	150	70	80	0	0	0	664
Ariz-N. Mex	0	0	0	0	0	0	4	4	14	4	26
Calif-So. Nev	1150	288	197	462	115	272	57	7	7	3	2558
TOTAL(U.S.)	4023	4473	4048	2233	2090	1091	356	336	55	-450	18255[b]
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	219	205	205	181	88	73	72	75	80	86	1284
New Brunswick	0	0	0	25	0	0	0	0	0	0	25
Nova Scotia	0	0	0	15	15	0	0	0	0	0	30
Ontario	149	59	86	86	73	73	72	75	80	86	839
Quebec	70	146	119	55	0	0	0	0	0	0	390
WSCC	0	130	0	0	0	300	0	0	0	0	430
TOTAL(Canada)	219	335	205	181	88	373	72	75	80	86	1714[b]
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	4242	4808	4253	2414	2178	1464	428	411	135	-364	19969[b]
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Non-utility generators (NUGs) include the capacity of only those non-utility units that sell or are projected to sell electric energy or capacity, or both, to electric utilities and which are expected to be available to the electric utility at the time of system peak demand.

[b] Totals may not add due to rounding.

Table 31
Generating Unit Retirements[a] – Summer – MW
(January 1, 1990 – December 31, 1999)

	PROJECTED										1990-1999
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total
United States											
ECAR	156	105	92	0	0	92	505	93	93	0	1136
ERCOT	0	36	0	0	0	351	145	57	205	0	794
MAAC	150	0	40	3	2	0	0	2	215	107	519
MAIN	0	0	0	0	0	0	0	0	54	124	178
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	124	124
Wis-Upper Mich	0	0	0	0	0	0	0	0	54	0	54
MAPP	0	0	12	0	0	0	4	0	12	0	28
NPCC	0	185	128	202	0	1	0	39	0	28	583
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	185	128	202	0	1	0	39	0	28	583
SERC	0	0	26	0	0	0	16	0	28	14	84
Florida	0	0	26	0	0	0	0	0	28	14	68
Southern	0	0	0	0	0	0	16	0	0	0	16
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	20	0	34	0	0	79	55	0	0	140	328
Southeast	0	0	34	0	0	0	55	0	0	140	229
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	20	0	0	0	0	79	0	0	0	0	99
WSCC	28	0	6	140	140	0	0	0	0	0	314
NW Pool	0	0	6	0	0	0	0	0	0	0	6
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	28	0	0	0	0	0	0	0	0	0	28
Calif-So. Nev	0	0	0	140	140	0	0	0	0	0	280
TOTAL(U.S.)	354	326	338	345	142	523	725	191	607	413	3964[b]
Canada											
MAPP	0	0	41	0	0	0	0	0	0		41
NPCC	0	0	0	19	0	0	0	0	0	0	19
New Brunswick	0	0	0	19	0	0	0	0	0	0	19
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	87	0	0	0	0	14	12	0	0	75	188
TOTAL(Canada)	87	0	41	19	0	14	12	0	0	75	248[b]
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	441	326	379	364	142	537	737	191	607	488	4212[b]
ASCC	9	0	8	3	8	0	14	14	17	0	73

[a] Includes utility and non-utility generating units.

[b] Totals may not add due to rounding.

Transmission

The transmission data in this section was reported directly to NERC. It includes the circuit miles of high voltage transmission lines operating at 230 kV and above, both alternating current (ac) and direct current (dc), for the Regional Reliability Councils.

1990-1999 Projections

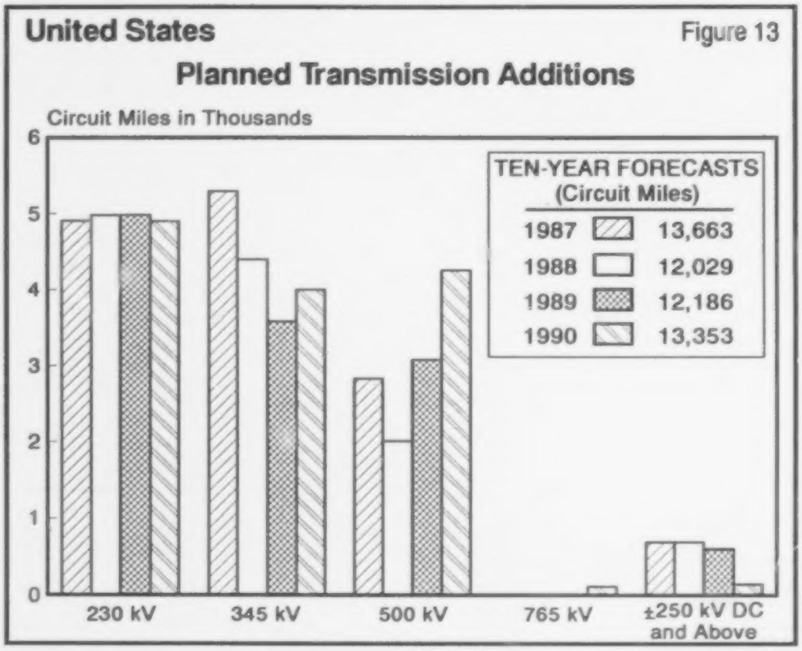
As of December 31, 1989, the transmission systems in the United States were comprised of about 146,600 circuit miles of high voltage lines. Similar transmission in Canada at the end of 1989 totaled 39,920 circuit miles. Details of the 1989 existing transmission by Region and subregion are shown in Table 32.

The planned transmission additions in the United States over the 1990-1999 period are expected to total 13,353 circuit miles. Similar transmission additions in Canada are projected to be 9,366 circuit miles over this same period. These planned transmission additions by voltage for the Regions and subregions are shown in Tables 33 (1990-1994) and 34 (1995-1999).

By the end of December 1999, the U.S. high voltage transmission systems are expected to approach 159,950 circuit miles. Transmission systems in Canada by this same time are expected to reach 49,280 circuit miles. A breakdown of the December 31, 1999 transmission circuit miles by voltage for the Regions and subregions is shown in Table 35.

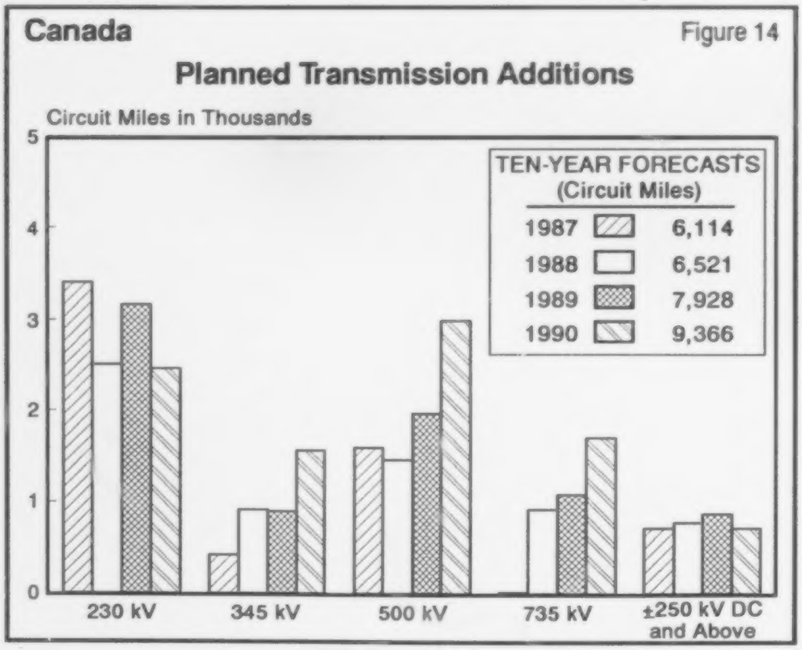
Comparison of Recent Projections

The predominant voltage of the planned transmission additions in the United States in the next ten years will be 230 kV, similar to the 1989 and 1988 ten-year projections. In Canada, however, the predominant voltage of planned additions will be 500 kV, a change from the predominant 230 kV planned additions of prior forecasts. Comparisons of the current ten-year projections of transmission additions with the 1989, 1988, and 1987 ten-year projections are shown in Figures 13 (United States) and 14 (Canada).



United States Figure 13

Planned Transmission Additions



Canada Figure 14

Planned Transmission Additions

Table 32
Existing Transmission (230 kV & Above) Systems – Circuit Miles
(December 31, 1989)

	AC VOLTAGE (kV)					DC VOLTAGE (kV)					AC & DC
	230	345	500	765	Subtotal	±250-300	±400	±450	±500	Subtotal	Total
United States											
ECAR	1108	11793	852	2022	15775	0	0	0	0	0	15775
ERCOT	0	6886	0	0	6886	0	0	0	0	0	6886
MAAC	4768	170	1676	0	6614	0	0	0	0	0	6614
MAIN	241	5180	0	90	5511	0	0	0	0	0	5511
Cmnwlth Edison	0	2462	0	90	2552	0	0	0	0	0	2552
East Missouri	90	983	0	0	1073	0	0	0	0	0	1073
S Cent Illinois	48	789	0	0	837	0	0	0	0	0	837
Wis-Upper Mich	103	946	0	0	1049	0	0	0	0	0	1049
MAPP	7142	5156	642	0	12940	465	436	0	0	901	13841
NPCC	1534	4363	5	316	6218	0	0	59	0	59	6277
New York	1090	2612	5	316	4023	0	0	0	0	0	4023
NEPOOL	444	1751	0	0	2195	0	0	59	0	59	2254
SERC	19676	2	7609	0	27287	0	0	0	0	0	27287
Florida	4586	0	1192	0	5778	0	0	0	0	0	5778
Southern	6206	0	2163	0	8369	0	0	0	0	0	8369
TVA	30	2	2401	0	2433	0	0	0	0	0	2433
VACAR	8854	0	1853	0	10707	0	0	0	0	0	10707
SPP	4389	4695	2096	0	11180	0	0	0	0	0	11180
Southeast	2385	98	2003	0	4486	0	0	0	0	0	4486
West Central	1426	2280	47	0	3753	0	0	0	0	0	3753
Northern	578	2317	46	0	2941	0	0	0	0	0	2941
WSCC	31469	9344[a]	11078	0	51891	0	0	0	1333	1333	53224
NW Pool	12755	3904	5674	0	22333	0	0	0	264	264	22597
Rocky Mt Area	3965	912	0	0	4877	0	0	0	0	0	4877
Ariz-N. Mex	2467	4032	1676	0	8175	0	0	0	0	0	8175
Calif-So. Nev	12282	496	3728	0	16506	0	0	0	1069	1069	17575
TOTAL(U.S.)	70327	47589	23958	2428	144302	465	436	59	1333	2293	146595
Canada											
MAPP	4145	0	130	0	4275	0	0	1139	0	1139	5414
NPCC	11885	5047	1554	6257	24743	0	0	93	0	93	24836
New Brunswick	389	774	0	0	1163	0	0	0	0	0	1163
Nova Scotia	670	60	0	0	730	0	0	0	0	0	730
Ontario	8446	4	1554	0	10004	0	0	0	0	0	10004
Quebec	2380	4209[b]	0	6257[c]	12846	0	0	93	0	93	12939
WSCC	5901	266[a]	3453	0	9620	47	0	0	0	47	9667
TOTAL(Canada)	21931	5313	5137	6257	38638	47	0	1232	0	1279	39917
Mexico											
WSCC	425	0	0	0	425	0	0	0	0	0	425
NERC-Total	92683	52902	29095	8685	183365	512	436	1291	1333	3572	186937
ASCC	141	0	0	0	141	0	0	0	0	0	141

[a] Where appropriate, includes 287 kV and 360 kV lines.
[b] 315 kV lines.
[c] 735 kV lines.

Table 33
Planned Transmission Additions by Voltage (230 kV & Above) – Circuit Miles
(1990–1994)

	AC VOLTAGE (kV)					DC VOLTAGE (kV)					AC & DC
	230	345	500	765	Subtotal	±250-300	±400	±450	±500	Subtotal	Total
United States											
ECAR	90	59	0	0	149	0	0	0	0	0	149
ERCOT	0	652	0	0	652	0	0	0	0	0	652
MAAC	279	0	107	0	386	0	0	0	0	0	386
MAIN	0	240	0	0	240	0	0	0	0	0	240
Cmnwlth Edison	0	101	0	0	101	0	0	0	0	0	101
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	59	0	0	59	0	0	0	0	0	59
Wis-Upper Mich	0	80	0	0	80	0	0	0	0	0	80
MAPP	164	186	0	0	350	0	0	0	0	0	350
NPCC	0	177	0	0	177	0	0	133	0	133	310
New York	0	27	0	0	27	0	0	0	0	0	27
NEPOOL	0	150	0	0	150	0	0	133	0	133	283
SERC	1232	0	387	0	1619	0	0	0	0	0	1619
Florida	354	0	150	0	504	0	0	0	0	0	504
Southern	247	0	79	0	326	0	0	0	0	0	326
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	631	0	158	0	789	0	0	0	0	0	789
SPP	293	326	14	0	633	0	0	0	0	0	633
Southeast	254	0	14	0	268	0	0	0	0	0	268
West Central	39	221	0	0	260	0	0	0	0	0	260
Northern	0	105	0	0	105	0	0	0	0	0	105
WSCC	790	648[a]	2099	0	3537	0	0	0	0	0	3537
NW Pool	295	340	708	0	1343	0	0	0	0	0	1343
Rocky Mt Area	339	113	0	0	452	0	0	0	0	0	452
Ariz-N. Mex	186	125	260	0	571	0	0	0	0	0	571
Calif-So. Nev	-30	70	1131	0	1171	0	0	0	0	0	1171
TOTAL(U.S.)	2848	2288	2607	0	7743	0	0	133	0	133	7876
Canada											
MAPP	365	0	0	0	365	0	0	0	0	0	365
NPCC	416	793	845	673	2727	0	0	701	0	701	3428
New Brunswick	8	181	0	0	189	0	0	0	0	0	189
Nova Scotia	128	230	0	0	358	0	0	0	0	0	358
Ontario	30	0	845	0	875	0	0	0	0	0	875
Quebec	250	382[b]	0	673[c]	1305	0	0	701	0	701	2006
WSCC	368	38[a]	205	0	611	0	0	0	0	0	611
TOTAL(Canada)	1149	831	1050	673	3703	0	0	701	0	701	4404
Mexico											
WSCC	99	0	0	0	99	0	0	0	0	0	99
NERC-Total	4096	3119	3657	673	11545	0	0	834	0	834	12379
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Where appropriate, includes 287 kV and 360 kV lines.

[b] 315 kV lines.

[c] 735 kV lines.

Table 34
Planned Transmission Additions by Voltage (230 kV & Above) – Circuit Miles
(1995–1999)

	AC VOLTAGE (kV)					DC VOLTAGE (kV)					AC & DC
	230	345	500	765	Subtotal	±250-300	±400	±450	±500	Subtotal	Total
United States											
ECAR	4	28	196	100	328	0	0	0	0	0	328
ERCOT	0	468	0	0	468	0	0	0	0	0	468
MAAC	181	0	160	0	341	0	0	0	0	0	341
MAIN	0	14	0	0	14	0	0	0	0	0	14
Cmnwlth Edison	0	14	0	0	14	0	0	0	0	0	14
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	91	253	0	0	344	0	0	0	0	0	344
NPCC	75	189	0	0	264	0	0	0	0	0	264
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	75	189	0	0	264	0	0	0	0	0	264
SERC	670	0	368	0	1038	0	0	0	0	0	1038
Florida	115	0	48	0	163	0	0	0	0	0	163
Southern	222	0	55	0	277	0	0	0	0	0	277
TVA	0	0	62	0	62	0	0	0	0	0	62
VACAR	333	0	203	0	536	0	0	0	0	0	536
SPP	122	236	154	0	512	0	0	0	0	0	512
Southeast	122	0	154	0	276	0	0	0	0	0	276
West Central	0	159	0	0	159	0	0	0	0	0	159
Northern	0	77	0	0	77	0	0	0	0	0	77
WSCC	892	516[a]	760	0	2168	0	0	0	0	0	2168
NW Pool	748	0	314	0	1062	0	0	0	0	0	1062
Rocky Mt Area	-64	390	0	0	326	0	0	0	0	0	326
Ariz-N. Mex	141	124	1	0	266	0	0	0	0	0	266
Calif-So. Nev	67	2	445	0	514	0	0	0	0	0	514
TOTAL(U.S.)	2035	1704	1638	100	5477	0	0	0	0	0	5477
Canada											
MAPP	505	0	0	0	505	0	0	0	0	0	505
NPCC	680	726	1016	1006	3428	0	0	0	0	0	3428
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	28	166	0	0	194	0	0	0	0	0	194
Ontario	552	0	1016	0	1568	0	0	0	0	0	1568
Quebec	100	560[b]	0	1006[c]	1666	0	0	0	0	0	1666
WSCC	117	0	912	0	1029	0	0	0	0	0	1029
TOTAL(Canada)	1302	726	1928	1006	4962	0	0	0	0	0	4962
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	3337	2430	3566	1106	10439	0	0	0	0	0	10439
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Where appropriate, includes 287 kV and 360 kV lines.

[b] 315 kV lines.

[c] 735 kV lines.

Table 35
Existing and Planned Transmission (230 kV & Above) Systems – Circuit Miles
(December 31, 1999)

	AC VOLTAGE (kV)					DC VOLTAGE (kV)					AC & DC
	230	345	500	765	Subtotal	±250-300	±400	±450	±500	Subtotal	Total
United States											
ECAR	1202	11880	1048	2122	16252	0	0	0	0	0	16252
ERCOT	0	8006	0	0	8006	0	0	0	0	0	8006
MAAC	5228	170	1943	0	7341	0	0	0	0	0	7341
MAIN	241	5434	0	90	5765	0	0	0	0	0	5765
Cmnwlth Edison	0	2577	0	90	2667	0	0	0	0	0	2667
East Missouri	90	983	0	0	1073	0	0	0	0	0	1073
S Cent Illinois	48	848	0	0	896	0	0	0	0	0	896
Wis-Upper Mich	103	1026	0	0	1129	0	0	0	0	0	1129
MAPP	7397	5595	642	0	13634	465	436	436	0	901	14535
NPCC	1609	4729	5	316	6659	0	0	192	0	192	6851
New York	1090	2639	5	316	4050	0	0	0	0	0	4050
NEPOOL	519	2090	0	0	2609	0	0	192	0	192	2801
SERC	21578	2	8364	0	29944	0	0	0	0	0	29944
Florida	5055	0	1390	0	6445	0	0	0	0	0	6445
Southern	6675	0	2297	0	8972	0	0	0	0	0	8972
TVA	30	2	2463	0	2495	0	0	0	0	0	2495
VACAR	9818	0	2214	0	12032	0	0	0	0	0	12032
SPP	4804	5257	2264	0	12325	0	0	0	0	0	12325
Southeast	2761	98	2171	0	5030	0	0	0	0	0	5030
West Central	1465	2660	47	0	4172	0	0	0	0	0	4172
Northern	578	2499	46	0	3123	0	0	0	0	0	3123
WSCC	33151	10508[a]	13937	0	57596	0	0	0	1333	1333	58929
NW Pool	13798	4244	6696	0	24738	0	0	0	264	264	25002
Rocky Mt Area	4240	1415	0	0	5655	0	0	0	0	0	5655
Ariz-N. Mex	2794	4281	1937	0	9012	0	0	0	0	0	9012
Calif-So. Nev	12319	568	5304	0	18191	0	0	0	1284	1284	19260
TOTAL(U.S.)	75210	51581	28203	2528	157522	465	436	192	1333	2426	159948
Canada											
MAPP	5015	0	130	0	5145	0	0	1139	0	1139	6284
NPCC	12981	6566	3415	7936	30898	0	0	794	0	794	31692
New Brunswick	397	955	0	0	1352	0	0	0	0	0	1352
Nova Scotia	826	456	0	0	1282	0	0	0	0	0	1282
Ontario	9028	4	3415	0	12447	0	0	0	0	0	12447
Quebec	2730	5151[b]	0	7936[c]	15817	0	0	794	0	794	16611
WSCC	6386	304[a]	4570	0	11260	47	0	0	0	47	11307
TOTAL(Canada)	24382	6870	8115	7936	47303	47	0	1933	0	1980	49283
Mexico											
WSCC	524	0	0	0	524	0	0	0	0	0	524
NERC-Total	100116	58451	36318	10464	205349	512	436	2125	1333	4406	209755
ASCC	141	0	0	0	141	0	0	0	0	0	141

[a] Where appropriate, includes 287 kV and 360 kV lines.

[b] 315 kV lines.

[c] 735 kV lines.

Appendixes

A. Installed Generating Capacity .... A

B. Electrical Energy Production .... B

C. Fossil Fuel Requirements for Coal, Oil, and Natural Gas C

D. Generating Unit Additions .... D

E. Coal-Fired Generating Unit Additions .... E

F. Nuclear Generating Unit Additions .... F

G. Hydro (Conventional) Generating Unit Additions .... G

H. Oil-Fired Generating Unit Additions .... H

I. Gas-Fired Generating Unit Additions I

J. Pumped Storage Generating Unit Additions .... J

K. Other Utility Generating Unit Additions .... K

L. Non-Utility Generator (NUG) Additions L

M. Jointly-Owned Generating Unit Additions .... M

N. Generating Unit Retirements .... N

O. Generating Unit Codes and Abbreviations .... O

P. NERC Regions and Subregions .... P

Actual and Projected Coal-Fired Generating Capacity – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	79126	80305	81976	81976	82112	82260	82280	82404	82472	82459	82495
ERCOT	13884	13883	13883	14381	14381	14381	15131	15881	16526	17276	18971
MAAC	17303	17278	17800	17800	17800	17865	17865	17865	17865	18015	18015
MAIN	27335	27151	27172	27172	27209	27222	27225	27220	27220	27226	27226
Cmnwlth Edison	6940	6940	6940	6940	6940	6940	6940	6940	6940	6940	6940
East Missouri	5589	5585	5593	5593	5593	5593	5593	5641	5641	5641	5641
S Cent Illinois	7854	7849	7849	7849	7849	7849	7849	7796	7796	7796	7796
Wis-Upper Mich	6952	6777	6790	6790	6827	6840	6843	6843	6843	6849	6849
MAPP	20159	20122	20190	20234	20296	20296	20296	20296	20296	20296	20342
NPCC	7612	7621	7621	7621	7621	7621	7621	7621	7621	7621	7621
New York	4852	4852	4852	4852	4852	4852	4852	4852	4852	4852	4852
NEPOOL	2760	2769	2769	2769	2769	2769	2769	2769	2769	2769	2769
SERC	69688	69927	70916	71294	71294	71644	72557	73700	74160	75443	75443
Florida	8426	8426	8426	8426	8426	8426	8426	9194	9654	10422	10422
Southern	24826	24810	25477	25477	25477	25434	25434	25434	25434	25559	25559
TVA	15833	15833	15833	15833	15833	15833	15833	15833	15833	15833	15833
VACAR	20603	20858	21180	21558	21558	21951	22864	23239	23239	23629	23629
SPP	26521	26624	26647	26647	26891	26906	26926	27026	27264	27366	27616
Southeast	6099	6204	6204	6204	6204	6219	6239	6239	6274	6309	6309
West Central	9843	9843	9843	9843	10087	10087	10087	10087	10087	10087	10087
Northern	10579	10577	10600	10600	10600	10600	10600	10700	10903	10970	11220
WSCC[a]	29097	29471	29655	29655	29655	29655	29793	29843	29987	30597	30722
NW Pool	11138	11160	11158	11158	11158	11158	11158	11158	11158	11158	11158
Rocky Mt Area	5727	5727	5827	5826	5827	5827	5827	5827	5827	6312	6312
Ariz-N. Mex	6993	7543	7627	7628	7627	7627	7622	7672	7691	7691	7691
Calif-So. Nev	5239	5043	5043	5043	5043	5043	5186	5186	5311	5436	5561
TOTAL(U.S.)	290725	292382	295860	296780	297259	297850	299694	301856	303411	306299	308451
Canada											
MAPP	1896	1801	1771	2010	2010	2010	2010	2010	2283	2283	2283
NPCC	11536	11536	11536	11686	11686	12281	12458	12458	12458	13063	13063
New Brunswick	304	304	304	304	304	734	904	904	904	1344	1344
Nova Scotia	1050	1050	1050	1200	1200	1365	1365	1365	1365	1530	1530
Ontario	10182	10182	10182	10182	10182	10182	10189	10189	10189	10189	10189
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	4672	5078	5461	5867	5867	5867	5867	5867	5867	5867	5867
TOTAL(Canada)	18104	18415	18768	19563	19563	20158	20335	20335	20608	21213	21213
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	308829	310797	314628	316343	316822	318008	320029	322191	324019	327512	329664
ASCC	45	50	50	50	50	50	50	50	50	50	50

[a] Because of subregional peak demand diversities, the sum of the individual subregional capacities at the time of the respective subregional peak demands may not equal the total WSCC–U.S. capacity.

Actual and Projected Nuclear Generating Capacity – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	7702	7702	7702	7702	7748	7748	7748	7748	7748	7748	7748
ERCOT	2500	3650	3650	4800	4800	4800	4800	4800	4800	4800	4800
MAAC	11562	12647	12647	12647	12647	12647	12647	12647	12647	12647	12647
MAIN	14860	14867	14867	14867	14867	14867	14867	14867	14867	14867	14867
Cmnwlth Edison	11294	11294	11294	11294	11294	11294	11294	11294	11294	11294	11294
East Missouri	1118	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125
S Cent Illinois	930	930	930	930	930	930	930	930	930	930	930
Wis-Upper Mich	1518	1518	1518	1518	1518	1518	1518	1518	1518	1518	1518
MAPP	3699	3699	3699	3699	3699	3699	3699	3699	3699	3699	3699
NPCC	9216	11151	11166	11166	11186	11186	11186	11186	11186	11186	11186
New York	4164	4769	4784	4784	4804	4804	4804	4804	4804	4804	4804
NEPOOL	5052	6382	6382	6382	6382	6382	6382	6382	6382	6382	6382
SERC	29249	29272	29272	30442	30442	30442	31612	31612	31612	32824	32824
Florida	3836	3836	3836	3836	3836	3836	3836	3836	3836	3836	3836
Southern	5486	5509	5509	5509	5509	5509	5509	5509	5509	5509	5509
TVA	5491	5491	5491	6661	6661	6661	7831	7831	7831	9043	9043
VACAR	14436	14436	14436	14436	14436	14436	14436	14436	14436	14436	14436
SPP	5800	5800	5825	5825	5839	5872	5872	5872	5872	5872	5872
Southeast	4733	4733	4733	4733	4747	4780	4780	4780	4780	4780	4780
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	1067	1067	1092	1092	1092	1092	1092	1092	1092	1092	1092
WSCC	10980	10755	10755	10803	10803	10803	10803	10803	10803	10803	10803
NW Pool	2199	2199	2199	2247	2247	2247	2247	2247	2247	2247	2247
Rocky Mt Area	230	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	2775	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780
Calif-So. Nev	5776	5776	5776	5776	5776	5776	5776	5776	5776	5776	5776
TOTAL(U.S.)	95568	99543	99583	101951	102031	102064	103234	103234	103234	104446	104446
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	11894	12831	13707	14588	15466	15461	15456	15456	15456	15456	15456
New Brunswick	635	635	635	635	635	635	635	635	635	635	635
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	10584	11521	12402	13283	14164	14164	14164	14164	14164	14164	14164
Quebec	675	675	670	670	667	662	657	657	657	657	657
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	11894	12831	13707	14588	15466	15461	15456	15456	15456	15456	15456
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	107462	112374	113290	116539	117497	117525	118690	118690	118690	119902	119902
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Hydro[a] Generating Capacity – Summer – MW

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989[b]	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	685	685	690	690	690	690	690	690	690	690	690
ERCOT	329	329	329	329	329	329	329	329	329	329	329
MAAC	1048	1048	1072	1072	1072	1048	1048	1048	1048	1048	1048
MAIN	576	555	555	555	558	558	558	558	558	562	562
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	331	331	331	331	331	331	331	331	331	331	331
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	245	224	224	224	227	227	227	227	227	231	231
MAPP	2957	2940	2913	2720	2720	2720	2720	2728	2728	2728	2728
NPCC	5380	5395	5409	5410	5424	5465	5465	5465	5795	5795	5795
New York	3990	4002	3993	3993	4007	4048	4048	4048	4378	4378	4378
NEPOOL	1390	1393	1416	1417	1417	1417	1417	1417	1417	1417	1417
SERC	11219	11368	11368	11373	11373	11373	11373	11373	11373	11373	11373
Florida	47	47	47	47	47	47	47	47	47	47	47
Southern	3818	3801	3801	3801	3801	3801	3801	3801	3801	3801	3801
TVA	4674	4674	4674	4674	4674	4674	4674	4674	4674	4674	4674
VACAR	2680	2846	2846	2851	2851	2851	2851	2851	2851	2851	2851
SPP	2494	2494	2494	2610	2610	2627	2652	2652	2652	2652	2652
Southeast	87	87	87	87	87	104	104	104	104	104	104
West Central	2391	2391	2391	2507	2507	2507	2532	2532	2532	2532	2532
Northern	16	16	16	16	16	16	16	16	16	16	16
WSCC[c]	46467	42401	42469	42825	43051	43170	43253	43304	43444	43464	43463
NW Pool	33747	28103	28103	28120	27898	28338	28009	28435	28093	28093	28093
Rocky Mt Area	2390	2420	2453	2471	2475	2475	2475	2475	2475	2475	2475
Ariz-N. Mex	738	854	856	953	983	1019	1021	1021	1021	1024	1024
Calif-So. Nev	9592	9909	9939	10160	10204	10223	10257	10258	10364	10384	10383
TOTAL(U.S.)	71155	67215	67299	67584	67827	67980	68088	68147	68617	68641	68640
Canada											
MAPP	4412	4412	5132	5492	5612	5612	5623	5619	5616	5616	5616
NPCC	26323	29809	30390	32091	32182	33624	34900	35589	36658	37423	39553
New Brunswick	878	878	878	878	878	878	878	878	878	878	878
Nova Scotia	383	383	383	383	383	383	383	383	383	383	383
Ontario	6181	6169	6165	6165	6170	6180	6428	6553	6682	6682	7232
Quebec	18881	22379	22964	24665	24751	26183	27211	27775	28715	29480	31060
WSCC	10893	11164	11164	11164	11164	11164	11164	11164	11164	11164	10893
TOTAL(Canada)	41628	45385	46686	48747	48958	50400	51687	52372	53438	54203	56062
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	112783	112600	113985	116331	116785	118380	119775	120519	122055	122844	124702
ASCC	49	49	157	157	157	157	157	157	157	157	157

[a] Conventional hydro. Adverse hydro conditions are generally assumed for forecast years by most systems.

[b] Capacity for actual year can be greater than capacity for forecast years if median or average hydro conditions occurred.

[c] See page 58, foonote a.

Actual and Projected Pumped Storage Generating Capacity – Summer – MW

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	3582	3582	3582	3582	3582	3582	3582	3582	3582	3582	3582
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	1280	1280	1560	1560	1560	1280	1280	1280	1280	1280	1280
MAIN	300	300	300	300	300	300	300	300	300	300	300
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	300	300	300	300	300	300	300	300	300	300	300
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	2716	2719	2719	2719	2719	2719	2719	2719	2719	2719	2719
New York	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040
NEPOOL	1676	1679	1679	1679	1679	1679	1679	1679	1679	1679	1679
SERC	4269	4442	4852	5384	5916	5916	5916	6874	6874	6874	6874
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	355	498	758	758	758	758	758	1716	1716	1716	1716
TVA	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532
VACAR	2382	2412	2562	3094	3626	3626	3626	3626	3626	3626	3626
SPP	260	260	260	260	260	260	260	260	260	260	260
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	260	260	260	260	260	260	260	260	260	260	260
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC[a]	3595	3596	3708	3702	3716	3797	3848	3824	3834	3835	3825
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	266	266	368	368	368	432	432	432	432	432	432
Ariz-N. Mex	148	148	148	148	148	162	162	162	162	167	167
Calif-So. Nev	3181	3182	3192	3186	3200	3198	3249	3225	3235	3236	3226
TOTAL(U.S.)	16002	16179	16981	17507	18053	17854	17905	18839	18849	18850	18840
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	16002	16179	16981	17507	18053	17854	17905	18839	18849	18850	18840
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] See page 58, footnote a.

Actual and Projected Geothermal Generating Capacity – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC	1866	1807	1814	1814	1814	1814	1814	1814	1814	1814	1814
NW Pool	24	24	31	31	31	31	31	31	31	31	31
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	1842	1783	1783	1783	1783	1783	1783	1783	1783	1783	1783
TOTAL(U.S.)	1866	1807	1814	1814	1814	1814	1814	1814	1814	1814	1814
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	575	575	575	575	613	613	651	651	651	651	651
NERC-Total	2441	2382	2389	2389	2427	2427	2465	2465	2465	2465	2465
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Oil- and Gas-Fired Generating Capacity[a] - Summer - MW
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	5886	6021	5986	6267	6548	7104	7314	7948	8958	9262	9299
ERCOT	32335	32726	32690	32690	32794	32897	33053	33121	33588	33660	34313
MAAC	17548	17697	18338	18442	18637	18991	19624	20302	20837	21279	22123
MAIN	6295	6299	6299	6382	6643	7043	7340	7640	8015	8245	8997
Cmnwlth Edison	3738	3738	3738	3738	3738	3738	3738	3738	3738	3738	4178
East Missouri	852	852	852	852	852	852	852	852	927	1002	1077
S Cent Illinois	795	795	795	795	831	931	931	931	931	1011	1067
Wis-Upper Mich	910	914	914	997	1222	1522	1819	2119	2419	2494	2675
MAPP	3711	4008	4088	4114	4180	4230	4310	4376	4427	4507	4576
NPCC	27860	28107	28333	28405	28102	28086	28086	28086	28086	28067	28067
New York	17293	17293	17293	17316	17316	17316	17316	17316	17316	17316	17316
NEPOOL	10567	10814	11040	11089	10786	10770	10770	10770	10770	10751	10751
SERC	26915	27635	28069	28469	29422	31754	34182	35631	37912	39290	40575
Florida	17763	17763	18198	18286	19159	20078	20463	20620	21189	21455	21783
Southern	2551	2540	2540	2540	2620	3724	4858	5094	6182	7214	8171
TVA	2066	2066	2066	2066	2066	2066	2066	2066	2066	2066	2066
VACAR	4535	5266	5265	5577	5577	5886	6795	7851	8475	8555	8555
SPP	30795	31527	31544	31601	31628	31628	31819	32407	32881	33439	34072
Southeast	16657	17276	17276	17242	17557	17557	17557	17608	17825	18049	18480
West Central	10378	10460	10460	10460	10216	10216	10251	10413	10487	10684	10854
Northern	3760	3791	3808	3899	3855	3855	4011	4386	4569	4706	4738
WSCC[b]	31060	30767	30942	31172	31260	31460	31938	33028	33312	33724	34483
NW Pool	2126	2135	2135	2135	2186	2195	2186	2195	2186	2186	2186
Rocky Mt Area	909	706	706	706	706	746	746	1076	1130	1130	1130
Ariz-N. Mex	4859	4730	4646	4646	4646	4646	4646	4716	4820	5100	5240
Calif-So. Nev	23166	23205	23464	23694	23722	23882	24360	25050	25176	25308	25927
TOTAL(U.S.)	182405	184787	186289	187542	189214	193193	197666	202539	208016	211473	216505
Canada											
MAPP	213	488	488	488	488	534	534	580	580	580	580
NPCC	5319	6088	6088	6424	6959	7303	7308	7408	7656	7656	7656
New Brunswick	1422	1422	1422	1758	1842	1833	1833	1833	1833	1833	1833
Nova Scotia	539	539	539	539	539	539	539	639	639	639	639
Ontario	3055	3050	3050	3050	3050	3050	3050	3050	3050	3050	3050
Quebec	303	1077	1077	1077	1528	1881	1886	1886	2134	2134	2134
WSCC	2308	2320	2233	2349	2349	2349	2349	2333	2320	2320	2311
TOTAL(Canada)	7840	8896	8809	9261	9796	10186	10191	10321	10556	10556	10547
Mexico											
WSCC	455	605	755	755	755	905	905	1055	1055	1055	1055
NERC-Total	190700	194288	195853	197558	199765	204284	208762	213915	219627	223084	228107
ASCC	958	959	956	948	951	919	943	929	915	899	899

[a] Includes oil-fired, gas-fired, and dual fuel(oil/gas)-fired steam, combustion turbine (and diesel), and combined cycle units.

[b] See page 58, footnote a.

Actual and Projected Oil-Fired Generating Capacity[a] – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	4357	4492	4492	4401	4605	5004	5134	5264	5924	5961	5998
ERCOT	40	40	40	40	40	40	39	39	39	39	39
MAAC	11149	11138	11186	11163	11221	11222	11255	11269	11470	11469	11489
MAIN	4477	4481	4481	4481	4481	4481	4481	4481	4481	4481	4481
Cmnwlth Edison	3136	3136	3136	3136	3136	3136	3136	3136	3136	3136	3136
East Missouri	538	538	538	538	538	538	538	538	538	538	538
S Cent Illinois	488	488	488	488	488	488	488	488	488	488	488
Wis-Upper Mich	315	319	319	319	319	319	319	319	319	319	319
MAPP	2973	3023	3103	3122	3138	3188	3268	3334	3335	3335	3404
NPCC	15586	15833	15834	15658	15355	15354	15354	15354	15354	15335	15335
New York	7349	7349	7349	7349	7349	7349	7349	7349	7349	7349	7349
NEPOOL	8237	8484	8485	8309	8006	8005	8005	8005	8005	7986	7986
SERC	16744	17178	17589	17640	17894	18403	18907	19510	20079	20221	20528
Florida	10382	10869	11280	11331	11585	11865	11865	12052	12621	12683	12990
Southern	1996	1943	1943	1943	1943	1956	1956	1940	1940	1940	1940
TVA	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464
VACAR	2902	2902	2902	2902	2902	3118	3622	4054	4054	4134	4134
SPP	1569	1591	1603	1603	1603	1603	1498	1498	1498	1498	1692
Southeast	221	221	221	221	221	221	221	221	221	221	221
West Central	203	203	203	203	203	203	203	203	203	203	397
Northern	1145	1167	1179	1179	1179	1179	1074	1074	1074	1074	1074
WSCC	1190	995	995	995	995	995	995	995	995	995	995
NW Pool	277	277	277	277	277	277	277	277	277	277	277
Rocky Mt Area	412	217	217	217	217	217	217	217	217	217	217
Ariz-N. Mex	12	12	12	12	12	12	12	12	12	12	12
Calif-So. Nev	489	489	489	489	489	489	489	489	489	489	489
TOTAL(U.S.)	58085	58771	59323	59103	59332	60290	60931	61744	63175	63334	63961
Canada											
MAPP	3	3	3	3	3	3	3	3	3	3	3
NPCC	4731	4873	4873	5209	5293	5284	5284	5384	5384	5384	5384
New Brunswick	1422	1422	1422	1758	1842	1833	1833	1833	1833	1833	1833
Nova Scotia	539	539	539	539	539	539	539	639	639	639	639
Ontario	2467	2462	2462	2462	2462	2462	2462	2462	2462	2462	2462
Quebec	303	450	450	450	450	450	450	450	450	450	450
WSCC	99	99	99	99	99	99	99	99	99	99	99
TOTAL(Canada)	4833	4975	4975	5311	5395	5386	5386	5486	5486	5486	5486
Mexico											
WSCC	455	605	755	755	755	905	905	1055	1055	1055	1055
NERC-Total	63373	64351	65053	65169	65482	66581	67222	68285	69716	69875	70502
ASCC	174	174	171	171	174	174	174	174	174	174	174

---

[a] includes oil-fired steam, combustion turbine (and diesel), and combined cycle units. Excludes dual fuel (oil/gas)-fired capacity.

Actual and Projected Oil-Steam Generating Capacity – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	2706	2706	2706	2706	2706	2973	2973	2973	3633	3633	3633
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	6599	6599	6599	6569	6569	6569	6602	6602	6602	6602	6602
MAIN	3305	3305	3305	3305	3305	3305	3305	3305	3305	3305	3305
Cmnwlth Edison	2698	2698	2698	2698	2698	2698	2698	2698	2698	2698	2698
East Missouri	196	196	196	196	196	196	196	196	196	196	196
S Cent Illinois	411	411	411	411	411	411	411	411	411	411	411
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	89	25	25	25	25	25	25	25	25	25	25
NPCC	12225	12483	12484	12483	12180	12179	12179	12179	12179	12179	12179
New York	5280	5280	5280	5280	5280	5280	5280	5280	5280	5280	5280
NEPOOL	6945	7203	7204	7203	6900	6899	6899	6899	6899	6899	6899
SERC	9616	10063	10269	10292	10266	10266	10266	10266	10528	10528	10528
Florida	7704	8191	8397	8420	8394	8394	8394	8394	8656	8656	8656
Southern	891	851	851	851	851	851	851	851	851	851	851
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021
SPP	167	167	167	167	167	167	167	167	167	167	167
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	164	164	164	164	164	164	164	164	164	164	164
Northern	3	3	3	3	3	3	3	3	3	3	3
WSCC	86	86	86	86	86	86	86	86	86	86	86
NW Pool	86	86	86	86	86	86	86	86	86	86	86
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	34793	35434	35641	35633	35304	35570	35603	35603	36525	36525	36525
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	4240	4387	4387	4387	4387	4378	4378	4378	4378	4378	4378
New Brunswick	1371	1371	1371	1371	1371	1362	1362	1362	1362	1362	1362
Nova Scotia	334	334	334	334	334	334	334	334	334	334	334
Ontario	2232	2232	2232	2232	2232	2232	2232	2232	2232	2232	2232
Quebec	303	450	450	450	450	450	450	450	450	450	450
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	4240	4387	4387	4387	4387	4378	4378	4378	4378	4378	4378
Mexico											
WSCC	286	436	586	586	586	736	736	886	886	886	886
NERC-Total	39319	40257	40614	40606	40277	40684	40717	40867	41789	41789	41789
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Oil-Combustion Turbine Generating Capacity[a] – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	1651	1651	1651	1560	1598	1598	1728	1858	1858	1895	1932
ERCOT	40	40	40	40	40	40	39	39	39	39	39
MAAC	4430	4419	4467	4474	4532	4533	4533	4547	4548	4547	4567
MAIN	1172	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176
Cmnwlth Edison	438	438	438	438	438	438	438	438	438	438	438
East Missouri	342	342	342	342	342	342	342	342	342	342	342
S Cent Illinois	77	77	77	77	77	77	77	77	77	77	77
Wis-Upper Mich	315	319	319	319	319	319	319	319	319	319	319
MAPP	2825	2939	3019	3038	3054	3104	3184	3250	3251	3251	3320
NPCC	3290	3279	3279	3104	3104	3104	3104	3104	3104	3085	3085
New York	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069	2069
NEPOOL	1221	1210	1210	1035	1035	1035	1035	1035	1035	1016	1016
SERC	7125	7112	7317	7345	7625	8134	8638	9241	9548	9628	9935
Florida	2675	2675	2880	2908	3188	3468	3468	3655	3962	3962	4269
Southern	1105	1092	1092	1092	1092	1105	1105	1089	1089	1089	1089
TVA	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464
VACAR	1881	1881	1881	1881	1881	2097	2601	3033	3033	3113	3113
SPP	1402	1424	1436	1436	1436	1436	1331	1331	1331	1331	1525
Southeast	221	221	221	221	221	221	221	221	221	221	221
West Central	39	39	39	39	39	39	39	39	39	39	233
Northern	1142	1164	1176	1176	1176	1176	1071	1071	1071	1071	1071
WSCC	1104	909	909	909	909	909	909	909	909	909	909
NW Pool	191	191	191	191	191	191	191	191	191	191	191
Rocky Mt Area	412	217	217	217	217	217	217	217	217	217	217
Ariz-N. Mex	12	12	12	12	12	12	12	12	12	12	12
Calif-So. Nev	489	489	489	489	489	489	489	489	489	489	489
TOTAL(U.S.)	23039	22949	23294	23082	23474	24034	24642	25455	25764	25861	26488
Canada											
MAPP	3	3	3	3	3	3	3	3	3	3	3
NPCC	491	486	486	822	906	906	906	1006	1006	1006	1006
New Brunswick	51	51	51	387	471	471	471	471	471	471	471
Nova Scotia	205	205	205	205	205	205	205	305	305	305	305
Ontario	235	230	230	230	230	230	230	230	230	230	230
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	99	99	99	99	99	99	99	99	99	99	99
TOTAL(Canada)	593	588	588	924	1008	1008	1008	1108	1108	1108	1108
Mexico											
WSCC	169	169	169	169	169	169	169	169	169	169	169
NERC-Total	23801	23706	24051	24175	24651	25211	25819	26732	27041	27138	27765
ASCC	174	174	171	171	174	174	174	174	174	174	174

---

[a] Includes diesel units.

Actual and Projected Oil-Combined Cycle Generating Capacity - Summer - MW
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	135	135	135	301	433	433	433	433	433	433
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	120	120	120	120	120	120	120	120	320	320	320
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	59	59	59	59	59	59	59	59	59	59	59
NPCC	71	71	71	71	71	71	71	71	71	71	71
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	71	71	71	71	71	71	71	71	71	71	71
SERC	3	3	3	3	3	3	3	3	3	65	65
Florida	3	3	3	3	3	3	3	3	3	65	65
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	253	388	388	388	554	686	686	686	886	948	948
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	253	388	388	388	554	686	686	686	886	948	948
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Gas-Fired Generating Capacity [a] – Summer – MW

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	1529	1529	1494	1866	1943	2100	2180	2684	3034	3301	3301
ERCOT	24703	24704	24668	24668	24772	24875	25032	25147	25607	25731	26376
MAAC	6399	6559	7152	7279	7416	7769	8369	9033	9367	9810	10634
MAIN	315	315	315	315	390	601	601	751	751	831	1032
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	37	37	37	37	37	37	37	37	37	37	37
S Cent Illinois	30	30	30	30	30	166	166	166	166	246	302
Wis-Upper Mich	248	248	248	248	323	398	398	548	548	548	693
MAPP	239	315	315	315	315	315	315	315	315	395	395
NPCC	45	45	270	495	495	495	495	495	495	495	495
New York	45	45	45	45	45	45	45	45	45	45	45
NEPOOL	0	0	225	450	450	450	450	450	450	450	450
SERC	7784	7538	7562	7804	8503	9142	9527	9497	9577	9931	10027
Florida	7381	6894	6918	6955	7574	8213	8598	8568	8568	8772	8793
Southern	378	420	420	420	500	500	500	500	580	730	805
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	25	224	224	429	429	429	429	429	429	429	429
SPP	12486	12579	12584	12641	12712	12712	12740	12982	13164	13361	13437
Southeast	2509	2509	2509	2475	2790	2790	2790	2737	2737	2737	2837
West Central	8541	8623	8623	8623	8379	8379	8414	8576	8650	8847	8823
Northern	1436	1447	1452	1543	1543	1543	1536	1669	1777	1777	1777
WSCC	2052	2044	2273	2273	2273	2273	2273	2603	2657	2657	2657
NW Pool	12	12	12	12	12	12	12	12	12	12	12
Rocky Mt Area	16	8	8	8	8	8	8	338	392	392	392
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	2024	2024	2253	2253	2253	2253	2253	2253	2253	2253	2253
TOTAL(U.S.)	55552	55628	56633	57656	58819	60282	61532	63507	64967	66512	68354
Canada											
MAPP	210	485	485	485	485	531	531	577	577	577	577
NPCC	588	1215	1215	1215	1666	2019	2024	2024	2272	2272	2272
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	588	588	588	588	588	588	588	588	588	588	588
Quebec	0	627	627	627	1078	1431	1436	1436	1684	1684	1684
WSCC	2209	2221	2134	2250	2250	2250	2250	2234	2221	2221	2212
TOTAL(Canada)	3007	3921	3834	3950	4401	4800	4805	4835	5070	5070	5061
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	58559	59549	60467	61606	63220	65082	66337	68342	70037	71582	73415
ASCC	488	488	488	480	480	448	472	458	444	428	428

[a] Includes gas-fired steam, combustion turbine (and diesel), and combined cycle units. Excludes dual fuel (oil/gas)-fired capacity.

Actual and Projected Gas-Steam Generating Capacity - Summer - MW
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	141	141	26	26	26	26	26	26	26	26	26
ERCOT	23680	23681	23645	23645	23645	23645	23342	23197	23197	22958	22886
MAAC	3345	3345	3345	3345	3349	3349	3349	3349	3349	3134	3027
MAIN	84	84	84	84	84	164	164	164	164	244	244
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	30	30	30	30	30	110	110	110	110	190	190
Wis-Upper Mich	54	54	54	54	54	54	54	54	54	54	54
MAPP	212	212	212	212	212	212	212	212	212	212	212
NPCC	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	5454	5008	5008	5008	5627	5627	5627	5595	5595	5595	5595
Florida	5212	4725	4725	4725	5344	5344	5344	5312	5312	5312	5312
Southern	242	283	283	283	283	283	283	283	283	283	283
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	10738	10749	10754	10720	10791	10791	10712	10942	11124	11286	11286
Southeast	2356	2356	2356	2322	2637	2637	2637	2592	2592	2592	2592
West Central	7380	7380	7380	7380	7136	7136	7136	7298	7372	7534	7534
Northern	1002	1013	1018	1018	1018	1018	939	1052	1160	1160	1160
WSCC	374	366	455	455	455	455	455	785	785	785	785
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	16	8	8	8	8	8	8	338	338	338	338
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	358	358	447	447	447	447	447	447	447	447	447
TOTAL(U.S.)	44028	43586	43529	43495	44189	44269	43887	44270	44452	44240	44061
Canada											
MAPP	95	220	220	220	220	220	220	220	220	220	220
NPCC	588	588	588	588	588	588	588	588	588	588	588
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	588	588	588	588	588	588	588	588	588	588	588
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	1937	1937	1850	1850	1850	1850	1850	1850	1850	1850	1850
TOTAL(Canada)	2620	2745	2658	2658	2658	2658	2658	2658	2658	2658	2658
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	46648	46331	46187	46153	46847	46927	46545	46928	47110	46898	46719
ASCC	0	0	0	0	0	0	0	0	0	0	0

APPENDIX A Installed Generating Capacity

Actual and Projected Gas-Combustion Turbine Generating Capacity[a] – Summer – MW

(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	1388	1388	1468	1840	1917	2074	2154	2658	3008	3088	3088
ERCOT	840	840	840	840	944	1047	1207	1307	1307	1546	1983
MAAC	2646	2806	3294	3294	3300	3503	3503	3740	3974	4405	4836
MAIN	231	231	231	231	306	381	381	531	531	531	606
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	37	37	37	37	37	37	37	37	37	37	37
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	194	194	194	194	269	344	344	494	494	494	569
MAPP	14	79	79	79	79	79	79	79	79	79	79
NPCC	45	45	45	45	45	45	45	45	45	45	45
New York	45	45	45	45	45	45	45	45	45	45	45
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	1799	1800	1824	1861	1861	2065	2065	2067	2067	2239	2335
Florida	1638	1638	1662	1699	1699	1903	1903	1905	1905	1927	1948
Southern	136	137	137	137	137	137	137	137	137	287	362
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	25	25	25	25	25	25	25	25	25	25	25
SPP	850	932	932	941	941	941	1048	968	968	1003	1079
Southeast	8	8	8	8	8	8	8	0	0	0	100
West Central	408	490	490	490	490	490	525	525	525	560	536
Northern	434	434	434	443	443	443	515	443	443	443	443
WSCC	666	666	706	706	706	706	706	706	760	760	760
NW Pool	12	12	12	12	[illegible]	12	12	12	12	12	12
Rocky Mt Area	0	0	0	0	[illegible]	0	0	0	54	54	54
Ariz-N. Mex	0	0	0	0	[illegible]	0	0	0	0	0	0
Calif-So. Nev	654	654	694	694	694	694	694	694	694	694	694
TOTAL(U.S.)	8479	8787	9419	9837	10099	10841	11188	12101	12739	13696	14811
Canada											
MAPP	115	265	265	265	265	311	311	357	357	357	357
NPCC	0	627	627	627	1078	1431	1436	1436	1684	1684	1684
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	627	627	627	1078	1431	1436	1436	1684	1684	1684
WSCC	272	284	284	400	400	400	400	384	371	371	362
TOTAL(Canada)	387	1176	1176	1292	1743	2142	2147	2177	2412	2412	2403
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	8866	9963	10595	11129	11842	12983	13335	14278	15151	16108	17214
ASCC	301	301	301	293	293	261	285	271	257	241	241

---

[a] Includes diesel units.

Actual and Projected Gas–Combined Cycle Generating Capacity – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	187	187
ERCOT	183	183	183	183	183	183	483	643	1103	1227	1507
MAAC	408	408	513	640	767	917	1517	1944	2044	2271	2771
MAIN	0	0	0	0	0	56	56	56	56	56	182
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	56	56	56	56	56	112
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	70
MAPP	13	24	24	24	24	24	24	24	24	104	104
NPCC	0	0	225	450	450	450	450	450	450	450	450
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	225	450	450	450	450	450	450	450	450
SERC	531	730	730	935	1015	1450	1835	1835	1915	2097	2097
Florida	531	531	531	531	531	966	1351	1351	1351	1533	1533
Southern	0	0	0	0	80	80	80	80	160	160	160
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	199	199	404	404	404	404	404	404	404	404
SPP	898	898	898	980	980	980	980	1072	1072	1072	1072
Southeast	145	145	145	145	145	145	145	145	145	145	145
West Central	753	753	753	753	753	753	753	753	753	753	753
Northern	0	0	0	82	82	82	82	174	174	174	174
WSCC	1012	1012	1112	1112	1112	1112	1112	1112	1112	1112	1112
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	1012	1012	1112	1112	1112	1112	1112	1112	1112	1112	1112
TOTAL(U.S.)	3045	3255	3685	4324	4531	5172	6457	7136	7776	8576	9482
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	[illegible]
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	3045	3255	3685	4324	4531	5172	6457	7136	7776	8576	9482
ASCC	187	187	187	187	187	187	187	187	187	187	187

Actual and Projected Dual Fuel(Oil/Gas)-Fired Generating Capacity[a] – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	7592	7982	7982	7982	7982	7982	7982	7935	7942	7890	7898
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	1503	1503	1503	1586	1772	1961	2258	2408	2783	2933	3484
Cmnwlth Edison	602	602	602	602	602	602	602	602	602	602	1042
East Missouri	277	277	277	277	277	277	277	277	352	427	502
S Cent Illinois	277	277	277	277	313	277	277	277	277	277	277
Wis-Upper Mich	347	347	347	430	580	805	1102	1252	1552	1627	1663
MAPP	499	670	670	677	727	727	727	727	777	777	777
NPCC	12229	12229	12229	12252	12252	12237	12237	12237	12237	12237	12237
New York	9899	9899	9899	9922	9922	9922	9922	9922	9922	9922	9922
NEPOOL	2330	2330	2330	2330	2330	2315	2315	2315	2315	2315	2315
SERC	2387	2919	2918	3025	3025	4209	5748	6624	8256	9138	10020
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	177	177	177	177	177	1268	2402	2654	3662	4544	5426
TVA	602	602	602	602	602	602	602	602	602	602	602
VACAR	1608	2140	2139	2246	2246	2339	2744	3368	3992	3992	3992
SPP	16740	17357	17357	17357	17313	17313	17581	17927	18219	18580	18943
Southeast	13927	14546	14546	14546	14546	14546	14546	14650	14867	15091	15422
West Central	1634	1634	1634	1634	1634	1634	1634	1634	1634	1634	1634
Northern	1179	1177	1177	1177	1133	1133	1401	1643	1718	1855	1887
WSCC[b]	27818	27728	27674	27904	27992	28192	28670	29430	29660	30072	30831
NW Pool	1837	1846	1846	1846	1897	1906	1897	1906	1897	1897	1897
Rocky Mt Area	481	481	481	481	481	521	521	521	521	521	521
Ariz-N. Mex	4847	4718	4634	4634	4634	4634	4634	4704	4808	5088	5228
Calif-So. Nev	20653	20692	20722	20952	20980	21140	21618	22308	22434	22566	23185
TOTAL(U.S.)	68768	70388	70333	70783	71063	72621	75203	77288	79874	81627	84190
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	[illegible]	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	68768	70388	70333	70783	71063	72621	75203	77288	79874	81627	84190
ASCC	296	297	297	297	297	297	297	297	297	297	297

[a] Includes dual fuel(oil/gas)-fired steam, combustion turbine (and diesel), and combined cycle units.

[b] See page 58, footnote a.

Actual and Projected Dual Fuel(Oil/Gas)-Steam Generating Capacity – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	6111	6111	6111	6111	6111	6111	6111	6111	6111	6059	5963
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	480	480	480	473	473	473	473	473	473	473	473
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	265	265	265	265	265	265	265	265	265	265	265
S Cent Illinois	138	138	138	138	138	138	138	138	138	138	138
Wis-Upper Mich	77	77	77	70	70	70	70	70	70	70	70
MAPP	85	139	139	139	139	139	139	139	139	139	139
NPCC	9953	9953	9953	9976	9976	9961	9961	9961	9961	9961	9961
New York	8197	8197	8197	8220	8220	8220	8220	8220	8220	8220	8220
NEPOOL	1756	1756	1756	1756	1756	1741	1741	1741	1741	1741	1741
SERC	1089	1089	995	995	995	995	995	995	995	995	995
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	177	177	177	177	177	177	177	177	177	177	177
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	912	912	818	818	818	818	818	818	818	818	818
SPP	15740	16340	16340	16340	16296	16296	16309	16413	16630	16854	17185
Southeast	13543	14140	14140	14140	14140	14140	14140	14244	14461	14685	15016
West Central	1572	1572	1572	1572	1572	1572	1572	1572	1572	1572	1572
Northern	625	628	628	628	584	584	597	597	597	597	597
WSCC	22600	22474	22390	22620	22618	22618	22556	22876	23065	23197	23592
NW Pool	542	542	542	542	602	602	602	602	602	602	602
Rocky Mt Area	264	264	264	264	264	264	264	264	264	264	264
Ariz-N. Mex	2489	2363	2279	2279	2279	2279	2279	2279	2342	2342	2342
Calif-So. Nev	19305	19305	19305	19535	19473	19473	19411	19731	19857	19989	20384
TOTAL(U.S.)	56058	56586	56408	56654	56608	56593	56544	56968	57374	57678	58308
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	56058	56586	56408	56654	56608	56593	56544	56968	57374	57678	58308
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Dual Fuel(Oil/Gas)–Combustion Turbine Generating Capacity[a]
Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	1341	1731	1731	1731	1731	1731	1731	1684	1684	1684	1684
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	1023	1023	1023	1113	1299	1488	1785	1935	2310	2460	3011
Cmnwlth Edison	602	602	602	602	602	602	602	602	602	602	1042
East Missouri	12	12	12	12	12	12	12	12	87	162	237
S Cent Illinois	139	139	139	139	175	139	139	139	139	139	139
Wis-Upper Mich	270	270	270	360	510	735	1032	1182	1482	1557	1593
MAPP	414	531	531	538	588	588	588	588	638	638	638
NPCC	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890
New York	1702	1702	1702	1702	1702	1702	1702	1702	1702	1702	1702
NEPOOL	188	188	188	188	188	188	188	188	188	188	188
SERC	1210	1742	1835	1902	1902	2943	4482	5358	6990	7872	8754
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	948	2082	2334	3342	4224	5106
TVA	602	602	602	602	602	602	602	602	602	602	602
VACAR	608	1140	1233	1300	1300	1393	1798	2422	3046	3046	3046
SPP	680	697	697	697	697	697	877	1119	1119	1256	1288
Southeast	155	177	177	177	177	177	177	177	177	177	177
West Central	62	62	62	62	62	62	62	62	62	62	62
Northern	463	458	458	458	458	458	638	880	880	1017	1049
WSCC[b]	3765	3801	3831	3831	3691	3661	3731	3941	3941	4221	4361
NW Pool	802	804	804	804	802	804	802	804	802	802	802
Rocky Mt Area	217	217	217	217	217	257	257	257	257	257	257
Ariz-N. Mex	1519	1516	1516	1516	1516	1516	1516	1586	1586	1866	2006
Calif-So. Nev	1227	1266	1296	1296	1156	1086	1156	1296	1296	1296	1296
TOTAL(U.S.)	10323	11415	11538	11702	11798	12998	15084	16515	18572	20021	21626
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	10323	11415	11538	11702	11798	[illegible]	15084	16515	18572	20021	21626
ASCC	154	155	155	155	155	155	155	155	155	155	155

[a] Includes diesel units.

[b] See page 58, footnote a.

Actual and Projected Dual Fuel(Oil/Gas)-Combined Cycle Generating Capacity[a]
Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	140	140	140	140	140	140	140	140	147	147	251
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	386	386	386	386	386	386	386	386	386	386	386
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	386	386	386	386	386	386	386	386	386	386	386
SERC	88	88	88	128	128	271	271	271	271	271	271
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	143	143	143	143	143	143
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	88	88	88	128	128	128	128	128	128	128	128
SPP	320	320	320	320	320	320	395	395	470	470	470
Southeast	229	229	229	229	229	229	229	229	229	229	229
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	91	91	91	91	91	91	166	166	241	241	241
WSCC[b]	1453	1453	1453	1453	1683	1913	2383	2613	2654	2654	2878
NW Pool	493	500	500	500	493	500	493	500	493	493	493
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	839	839	839	839	839	839	839	839	880	880	880
Calif-So. Nev	121	121	121	121	351	581	1051	1281	1281	1281	1505
TOTAL(U.S.)	2387	2387	2387	2427	2657	3030	3575	3805	3928	3928	4256
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	2387	2387	2387	2427	2657	3030	3575	3805	3928	3928	4256
ASCC	142	142	142	142	142	142	142	142	142	142	142

[a] Includes diesel units.

[b] See page 58, footnot

Actual and Projected Other Utility Generating Capacity[a] – Summer – MW
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	630	630	820	880	1160
ERCOT	50	0	0	0	0	300	300	500	650	650	950
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	6	6	6	6	6	6	6	6	6	6	6
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	6	6	6	6	6	6	6	6	6	6	6
MAPP	130	130	130	130	130	230	230	230	330	730	730
NPCC	52	52	52	52	52	52	365	867	1297	1840	2512
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	52	52	52	52	52	52	365	867	1297	1840	2512
SERC	0	0	0	350	350	990	1240	1490	2240	2780	3330
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	40	40	40	40	80	80
TVA	0	0	0	350	350	700	700	700	1200	1200	1500
VACAR	0	0	0	0	0	250	500	750	1000	1500	1750
SPP	614	614	624	624	668	668	624	462	409	247	162
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	454	454	464	464	464	464	464	302	302	140	55
Northern	160	160	160	160	204	204	160	160	107	107	107
WSCC	155	152	153	241	242	244	269	416	516	749	849
NW Pool	92	130	130	130	130	130	130	130	130	130	130
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	2	2	2	2	10	10
Calif-So. Nev	63	22	23	111	112	112	137	284	384	609	709
TOTAL(U.S.)	1007	954	965	1403	1448	2490	3664	4601	6268	7882	9699
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	200	400	600	800
TOTAL(Canada)	0	0	0	0	0	0	0	200	400	600	800
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	1007	954	965	1403	1448	2490	3664	4801	6668	8482	10499
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Includes utility capacity other than nuclear, coal-, oil-, and gas-fired, conventional hydro, geothermal, and pumped storage units.

Actual and Projected Non-Utility Generator (NUG) Capacity -- Summer – MW
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	237	1210	1261	1718	1906	2020	2159	2466	2488	2493	2501
ERCOT	2829	2972	2572	2272	2272	2047	1452	1375	1375	1239	824
MAAC	1088	1244	2156	2990	3592	4579	4628	4740	4740	4746	4746
MAIN	1	4	4	40	40	40	47	50	116	160	187
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	1	1	1	2	2	2	2	5	5	5	5
Wis-Upper Mich	0	3	3	38	38	38	45	45	111	155	182
MAPP	208	436	436	436	436	436	436	436	436	436	436
NPCC	1786	2435	3083	5355	6581	7109	7709	7709	7709	7670	7664
New York	686	817	1252	3157	4277	4804	5405	5405	5405	5405	5405
NEPOOL	1100	1618	1831	2198	2304	2305	2304	2304	2304	2265	2259
SERC	1985	2403	3077	4001	5154	5392	5538	5905	5936	5951	5951
Florida	785	793	826	976	1365	1489	1580	1947	1984	1999	1999
Southern	445	445	445	445	445	445	445	445	445	445	445
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	755	1165	1806	2580	3344	3458	3513	3513	3507	3507	3507
SPP	141	141	441	471	471	471	471	501	501	601	601
Southeast	11	11	11	11	11	11	11	11	11	11	11
West Central	100	100	400	400	400	400	400	400	400	500	500
Northern	30	30	30	60	60	60	60	90	90	90	90
WSCC[a]	6313	7529	8027	8466	9026	9378	9754	9895	10071	10092	10099
NW Pool	716	768	929	1011	972	1041	1002	1071	1167	1167	1167
Rocky Mt Area	175	175	231	416	538	688	758	838	838	838	838
Ariz-N. Mex	360	360	360	360	360	360	360	364	368	382	386
Calif-So. Nev	5062	6223	6511	6683	7091	7293	7569	7626	7633	7640	7643
TOTAL(U.S.)	14588	18374	21057	25749	29478	31472	32194	33077	33372	33388	33009
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	39	224	332	564	769	937	1025	1097	1172	1252	1338
New Brunswick	5	10	10	10	10	35	35	35	35	35	35
Nova Scotia	0	0	0	0	0	15	30	30	30	30	30
Ontario	34	193	252	338	424	497	570	642	717	797	883
Quebec	0	21	70	216	335	390	390	390	390	390	390
WSCC	0	0	0	130	130	130	430	430	430	430	430
TOTAL(Canada)	39	224	332	694	899	1067	1455	1527	1602	1682	1768
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	14627	18598	21389	26443	30377	32539	33649	34604	34974	35070	34777
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] See page 58, footnote a.

Actual and Projected Electrical Energy Produced by Coal – Millions kWh

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	425979	423395	423964	433653	429515	437295	439899	444090	452414	458421	466509
ERCOT	92310	90324	90821	92499	94097	95133	100762	105876	111207	117151	124771
MAAC	105516	99488	100062	104556	104875	105300	109183	110402	109320	112611	114917
MAIN	100241	105165	104588	110018	112435	114788	118091	118996	121657	124146	124487
Cmnwlth Edison	14142	16430	17015	18030	18265	19570	19670	20820	22420	22565	23760
East Missouri	23062	24156	22892	24577	25479	25006	27163	27146	26484	27796	27434
S Cent Illinois	31875	32412	32250	32584	33059	33544	33803	32732	33892	34345	33225
Wis-Upper Mich	31162	32167	32431	34827	35632	36668	37455	38298	38861	39440	40068
MAPP	93804	96044	98449	93743	96942	98572	97062	99981	101057	101219	103599
NPCC	48461	50631	50814	49721	49912	49963	49879	49226	49783	49617	50145
New York	31026	31098	31281	30188	30379	30430	30346	29693	30250	30084	30612
NEPOOL	17435	19533	19533	19533	19533	19533	19533	19533	19533	19533	19533
SERC	351111	362726	370247	381219	383763	394259	400221	415880	423497	439869	448190
Florida	52919	56211	58749	57069	57588	58281	58001	64202	66704	72477	74623
Southern	118518	118638	123917	129270	129834	132492	136408	140213	144051	148447	151613
TVA	76896	87531	87751	89100	85913	89514	86855	90431	89936	91444	92389
VACAR	102778	100346	99830	105780	110428	113972	118957	121034	122806	127501	129565
SPP	139849	140903	146004	150010	152946	155798	158230	163872	165306	166549	168968
Southeast	36864	35570	40221	43303	43091	43032	44148	45242	45412	47077	46867
West Central	54815	56853	56057	57018	58422	60751	61911	64479	64612	63631	64859
Northern	48170	48480	49726	49689	51433	52015	52171	54151	55282	55841	57242
WSCC	188230	180501	182902	183583	187874	188676	190625	193758	194878	196333	200994
NW Pool	70714	75240	75031	75465	76918	75761	75506	76481	75679	75234	76964
Rocky Mt Area	34566	33464	33739	32956	33226	33938	34150	34575	35026	35695	36471
Ariz-N. Mex	47386	38391	41088	42240	43952	45238	46498	48088	48726	50061	50850
Calif-So. Nev	35564	33406	33044	32922	33778	33739	34471	34614	35447	35343	36709
TOTAL(U.S.)	1545501	1549177	1567851	1599002	1612359	1639784	1663952	1702081	1729119	1765916	1802580
Canada											
MAPP	10045	10033	10031	10444	11399	11588	11652	12131	13288	13427	13275
NPCC	41138	38979	40317	38033	37899	39557	44036	46513	49592	54805	50489
New Brunswick	1638	1313	1219	1179	1793	4435	5582	5695	6250	8225	8420
Nova Scotia	5481	6131	6378	6878	7369	7801	8040	8189	8505	9104	9413
Ontario	34019	31535	32720	29976	28737	27321	30414	32629	34837	37476	32656
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	34146	35359	37753	39193	40052	40630	40847	41053	41197	41297	41279
TOTAL(Canada)	85329	84371	88101	87670	89350	91775	96535	99697	104077	109529	105043
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	1630830	1633548	1655952	1686672	1701709	1731559	1760487	1801778	1833196	1875445	1907623
ASCC	300	305	305	305	305	305	305	305	305	305	305

Actual and Projected Electrical Energy Produced by Nuclear – Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	41921	44232	45182	43212	48792	44173	46165	47892	45804	46692	46602
ERCOT	9615	21840	21347	29351	29273	29982	29695	30164	29727	30171	29968
MAAC	56458	71268	71943	73580	73982	76080	73104	75381	74313	73808	74024
MAIN	91336	86564	90845	89727	89118	91196	89547	91040	90669	90160	91253
Cmnwlth Edison	69330	63345	64375	65450	65435	64930	65930	66085	65225	66315	66275
East Missouri	8344	7809	9123	7678	7755	9060	7002	7509	9229	7651	7753
S Cent Illinois	2830	4215	6139	5315	4672	6010	5357	6074	5035	4854	6045
Wis-Upper Mich	10832	11195	11208	11284	11256	11196	11258	11372	11180	11340	11180
MAPP	24837	25050	24331	27437	24267	25047	27181	24919	25117	26863	24894
NPCC	56096	60769	63436	67709	65332	68278	65723	68614	65984	68532	65987
New York	22921	26003	27276	28277	25638	28189	25634	28266	25636	28184	25639
NEPOOL	33175	34766	36160	39432	39694	40089	40089	40348	40348	40348	40348
SERC	156839	164118	175174	178927	186320	189322	192622	192397	201139	197728	202497
Florida	20973	21695	22465	24241	25562	25049	24590	25200	25496	24180	25562
Southern	37296	35561	37059	37006	36765	36973	37543	37898	38134	38720	38794
TVA	15497	16081	19864	22712	29862	30264	36580	36580	39870	41243	43563
VACAR	83073	90781	95786	94968	94131	97036	93909	92719	97639	93585	94578
SPP	38273	40144	42446	39970	41203	42633	41493	40036	44192	41905	40067
Southeast	29148	33731	35876	32499	34356	35763	33894	33192	37164	34131	32936
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	9125	6413	6570	7471	6847	6870	7599	6844	7028	7774	7131
WSCC	54701	67195	64066	65533	66879	63815	66779	65703	65535	65494	66767
NW Pool	11603	13253	13423	14046	13893	13893	13893	13975	13893	13893	13893
Rocky Mt Area	577	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	5926	18110	15948	17086	16484	16640	16839	16802	16736	16929	16786
Calif-So. Nev	36595	35832	34695	34401	36502	33282	36047	34926	34906	34672	36088
TOTAL(U.S.)	530076	581180	598770	615446	625166	630526	632309	636146	642480	641353	642059
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	75730	82115	91040	99328	103502	108011	107783	109206	107845	106888	113278
New Brunswick	5269	4484	4484	4484	4484	4484	4484	4484	4484	4484	4484
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	65261	72731	82856	89844	94218	98827	98599	100022	98661	97704	104094
Quebec	5200	4900	3700	5000	4800	4700	4700	4700	4700	4700	4700
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	75730	82115	91040	99328	103502	108011	107783	109206	107845	106888	113278
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	605806	663295	689810	714774	728668	738537	740092	745352	750325	748241	755337
ASCC	0	0	0	0	0	0	0	0	0	0	0

APPENDIX B Electrical Energy Production

Actual and Projected Electrical Energy Produced by Hydro[a] – Millions kWh
(1990–1999 Forecast)

	ACTUAL[b]	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	3238	3243	3263	3276	3266	3263	3263	3273	3273	3267	3267
ERCOT	347	455	455	465	465	455	455	455	455	455	455
MAAC	3862	3607	3607	3607	3607	3607	3607	3607	3607	3607	3607
MAIN	1979	2002	2086	2111	2130	2131	2132	2131	2130	2148	2148
Cmnwlth Edison	10	0	0	0	0	0	0	0	0	0	0
East Missouri	1030	786	786	786	786	786	786	786	786	786	786
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	939	1216	1300	1325	1344	1345	1346	1345	1344	1362	1362
MAPP	10453	10327	11199	12263	12623	12777	12916	13152	13151	13150	13150
NPCC	29667	29462	29409	29184	28985	29075	29074	29042	29056	29056	29056
New York	24793	24623	24445	24220	24021	24111	24110	24078	24092	24092	24092
NEPOOL	4874	4839	4964	4964	4964	4964	4964	4964	4964	4964	4964
SERC	39973	32047	30901	30900	30901	30900	31082	31080	31082	31083	31082
Florida	232	244	244	244	244	244	244	244	244	244	244
Southern	8189	6763	6763	6763	6763	6763	6763	6763	6763	6763	6763
TVA	25557	19755	18609	18609	18609	18609	18609	18609	18609	18609	18609
VACAR	5995	5285	5285	5284	5285	5284	5466	5464	5466	5467	5466
SPP	7142	5922	5922	5922	5922	5985	6172	6172	6172	6172	6172
Southeast	650	293	293	293	293	356	420	420	420	420	420
West Central	6428	5566	5566	5566	5566	5566	5689	5689	5689	5689	5689
Northern	64	63	63	63	63	63	63	63	63	63	63
WSCC	165092	159249	161042	162677	162141	162636	163493	163898	163860	163905	163764
NW Pool	125193	112775	112809	113312	113259	113378	113753	114237	113971	114035	114058
Rocky Mt Area	6975	7048	7431	8541	8541	8541	8541	8541	8541	8541	8541
Ariz-N. Mex	3024	3025	3772	3732	3295	3470	3791	3661	3757	3563	3392
Calif-So. Nev	29900	36401	37030	37092	37046	37247	37408	37459	37591	37766	37773
TOTAL(U.S.)	261753	246314	247884	250405	250040	250829	252194	252810	252786	252843	252701
Canada											
MAPP	23908	26187	31059	31211	31848	31850	32525	32098	31155	32602	34766
NPCC	155703	148761	165553	169160	174235	176139	179294	188638	194044	196636	204809
New Brunswick	2186	2652	2652	2652	2652	2652	2652	2652	2652	2652	2652
Nova Scotia	929	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015
Ontario	35088	35494	35486	35593	35468	35472	35127	35971	36477	36469	37442
Quebec	117500	109600	126400	129900	135100	137000	140500	149000	153900	156500	163700
WSCC	46680	49628	50099	50948	51388	52488	55206	55262	55766	55617	55579
TOTAL(Canada)	226291	224576	246711	251319	257471	260477	267025	275998	280965	284855	295154
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	488044	470890	494595	501724	507511	511306	519219	528808	533751	537698	547855
ASCC	223	202	324	568	568	568	568	568	568	568	568

[a] Conventional hydro. Adverse hydro conditions are generally assumed for forecast years by most systems.

[b] Capacity for actual year can be greater than capacity for forecast years if median or average hydro conditions occurred.

Actual and Projected Electrical Energy Produced by Oil[a] and Gas[a] – Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	2082	3764	3397	2658	2965	3501	3718	4739	5658	5451	5748
ERCOT	82991	70202	75761	73692	79252	82700	85881	85136	87011	88813	89601
MAAC	28150	22133	22811	20088	23882	26301	32421	32850	38787	39883	41423
MAIN	871	407	615	734	1231	1230	1702	2070	2992	3346	4272
Cmnwlth Edison	486	140	170	245	545	675	835	920	1360	1575	1925
East Missouri	88	60	123	181	277	101	237	221	219	261	642
S Cent Illinois	113	102	183	181	195	211	298	426	697	761	709
Wis-Upper Mich	184	105	139	127	214	243	332	503	716	749	996
MAPP	418	644	664	714	789	797	908	1066	1280	1291	1421
NPCC	101616	95385	94276	82168	79968	78072	81385	80629	84139	85024	91233
New York	58344	59531	58944	47805	43823	39940	41262	37510	40308	39134	42708
NEPOOL	43272	35854	35332	34363	36145	38132	40123	43119	43831	45890	48525
SERC	50432	49128	50618	53090	54821	57829	61785	60644	63524	69981	72794
Florida	43404	43984	45508	45903	47352	50971	53361	50696	55616	60148	61613
Southern	2513	1822	1080	1257	1296	1933	2170	2347	2792	3587	4644
TVA	112	38	117	216	418	949	1705	2199	2371	2744	2792
VACAR	4403	3284	3913	5714	5755	3976	4549	5402	2745	3502	3745
SPP	63875	57149	54626	56426	54663	55451	58692	62092	65295	70283	72931
Southeast	39702	35218	33355	32885	30903	31092	32943	34805	36381	38927	41323
West Central	22957	20685	19926	22186	22011	22305	23651	24754	26251	28674	28690
Northern	1216	1246	1345	1355	1749	2054	2098	2533	2663	2682	2918
WSCC	73650	46767	50970	54883	57197	61568	63014	65584	70893	74681	76739
NW Pool	3861	5770	7692	7872	7789	7824	7701	7801	7859	8253	8240
Rocky Mt Area	259	244	233	230	288	255	282	291	618	675	742
Ariz-N. Mex	8137	4629	5342	4626	5415	6147	6981	6850	8177	8053	9127
Calif-So. Nev	61393	36124	37703	42155	43705	47342	48050	50642	54239	57700	58630
TOTAL(U.S.)	404085	345579	353738	344453	354768	367449	389506	394810	419579	438753	456162
Canada											
MAPP	730	733	734	660	331	414	439	445	227	283	324
NPCC	12371	14706	10062	9784	9467	7829	8971	9064	9526	8265	8064
New Brunswick	7079	8344	6593	6299	6692	5366	6370	6309	5995	4982	5345
Nova Scotia	2462	2749	2792	2540	2275	1986	1943	2113	2147	1892	1947
Ontario	1330	1013	677	945	500	477	658	642	1384	1391	772
Quebec	1500	2600	0	0	0	0	0	0	0	0	0
WSCC	8439	4914	4530	4794	6079	7182	6507	8161	8781	9266	9568
TOTAL(Canada)	21540	20353	15326	15238	15877	15425	15917	17670	18534	17814	17956
Mexico											
WSCC	1467	2112	2483	2838	2991	3093	3642	3600	2895	3500	4174
NERC-Total	427092	368044	371547	362529	373636	385967	409065	416080	441008	460067	478292
ASCC	2842	2922	2786	2603	2609	2654	2702	2751	2792	2841	2905

---

[a] Oil-fired, gas-fired, and dual fuel (oil/gas)-fired steam, combustion turbine (and diesel), and combined cycle units.

Actual and Projected Electrical Energy Produced by Oil[a] – Millions kWh

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	1572	3087	2727	2030	2371	2592	2693	3179	3562	3817	3776
ERCOT	1965	487	472	476	496	494	478	474	483	474	468
MAAC	20691	11429	12153	9441	11913	13334	16703	16493	18897	19606	18809
MAIN	327	300	408	429	738	837	1049	1157	1697	1911	2239
Cmnwlth Edison	143	140	165	240	530	655	805	890	1300	1500	1780
East Missouri	49	50	78	57	80	48	83	79	85	91	203
S Cent Illinois	75	67	114	116	120	129	157	184	308	316	252
Wis-Upper Mich	60	43	51	16	8	5	4	4	4	4	4
MAPP	111	128	137	131	155	152	180	209	271	298	330
NPCC	79112	73815	72559	60512	57170	55145	58667	57677	60746	61135	67053
New York	41124	42340	41541	30346	25438	21670	23444	19701	22267	20849	24454
NEPOOL	37988	31475	31018	30166	31732	33475	35223	37976	38479	40286	42599
SERC	30263	29160	30836	32406	32459	35006	37670	36284	38827	43934	45598
Florida	26046	26399	27838	28135	28396	31686	33193	30626	34742	38678	40034
Southern	92	54	16	52	58	79	68	107	120	166	213
TVA	112	38	117	216	418	949	1705	2199	2371	2744	2792
VACAR	4013	2669	2865	4003	3587	2292	2704	3352	1594	2346	2559
SPP	1134	109	122	143	120	133	181	185	207	266	343
Southeast	1066	0	0	10	0	3	35	14	1	19	46
West Central	29	19	19	19	17	17	17	29	54	54	55
Northern	39	90	103	114	103	113	129	142	152	193	242
WSCC	10432	3330	4281	4132	3510	2906	2721	2879	2789	3068	3000
NW Pool	310	18	509	511	509	509	509	511	509	509	509
Rocky Mt Area	0	14	14	18	18	46	77	85	105	123	141
Ariz-N. Mex	43	276	412	402	390	441	507	584	580	633	701
Calif-So. Nev	10079	3022	3346	3201	2593	1910	1628	1699	1595	1803	1649
TOTAL(U.S.)	145607	121845	123695	109700	108932	110599	120342	118537	127479	134509	141616
Canada											
MAPP	16	19	20	20	21	21	22	22	22	23	23
NPCC	12371	14706	10062	9784	9467	7829	8971	9064	9526	8265	8064
New Brunswick	7079	8344	6593	6299	6692	5366	6370	6309	5995	4982	5345
Nova Scotia	2462	2749	2792	2540	2275	1986	1943	2113	2147	1892	1947
Ontario	1330	1013	677	945	500	477	658	642	1384	1391	772
Quebec	1500	2600	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	12387	14725	10082	9804	9488	7850	8993	9086	9548	8288	8087
Mexico											
WSCC	1467	2112	2483	2838	2991	3093	3642	3600	2895	3500	4174
NERC-Total	159461	138682	136260	122342	121411	121542	132977	131223	139922	146297	153877
ASCC	124	123	129	135	141	148	154	161	168	176	185

---

[a] Oil-fired steam, combustion turbine (and diesel), and combined cycle units.

Actual and Projected Electrical Energy Produced by Oil-Steam - Millions kWh
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	1485	2635	2415	1771	2002	2188	2288	2728	3075	3215	3085
ERCOT	1704	378	377	391	386	386	386	388	384	385	385
MAAC	18589	10837	11619	9000	11407	12784	16002	15831	18001	18444	17722
MAIN	278	252	309	388	679	807	988	1093	1611	1811	2035
Cmnwlth Edison	135	140	165	240	525	645	795	875	1275	1465	1750
East Missouri	43	48	34	37	37	36	40	39	37	39	40
S Cent Illinois	73	64	110	111	117	126	153	179	299	307	245
Wis-Upper Mich	27	0	0	0	0	0	0	0	0	0	0
MAPP	68	60	61	55	62	61	67	71	96	86	61
NPCC	76110	71865	70891	58956	55499	53401	56900	55837	58844	59157	64979
New York	39704	41700	41165	30046	25088	21320	23144	19401	21967	20549	24154
NEPOOL	36406	30165	29726	28910	30411	32081	33756	36436	36877	38608	40825
SERC	28912	28749	30265	31720	31636	33487	34955	32834	34650	37643	38646
Florida	25176	26133	27473	27769	28083	31251	32476	29740	33333	36236	37305
Southern	19	44	6	23	30	59	49	91	106	151	199
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	3717	2572	2786	3928	3523	2177	2430	3003	1211	1256	1142
SPP	1088	38	49	59	47	63	91	108	148	138	158
Southeast	1049	0	0	0	0	0	0	0	0	2	16
West Central	14	13	13	13	13	13	13	26	51	51	52
Northern	25	25	36	46	34	50	78	82	97	85	90
WSCC	10313	2834	3202	2989	2551	2163	1935	2074	1954	2230	2128
NW Pool	272	18	18	18	18	18	18	18	18	18	18
Rocky Mt Area	0	12	12	15	15	15	15	15	15	15	15
Ariz-N. Mex	43	271	385	399	387	426	481	554	541	607	661
Calif-So. Nev	9998	2533	2787	2557	2131	1704	1421	1487	1380	1590	1434
TOTAL(U.S.)	138547	117648	119188	105329	104269	105340	113612	110964	118763	123109	129199
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	12259	14241	9552	9365	8973	7469	8394	8574	8979	7860	7677
New Brunswick	7070	8257	6504	6130	6448	5136	5970	6038	5771	4832	5211
Nova Scotia	2394	2384	2384	2303	2038	1869	1796	1923	1914	1731	1737
Ontario	1295	1000	664	932	487	464	628	613	1294	1297	729
Quebec	1500	2600	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	12259	14241	9552	9365	8973	7469	8394	8574	8979	7860	7677
Mexico											
WSCC	1436	1866	2483	2838	2991	3093	3642	3600	2895	3500	4174
NERC-Total	152242	133755	131223	117532	116233	115902	125648	123138	130637	134469	141050
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Electrical Energy Produced by Oil-Combustion Turbine[a]
Millions kWh
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	87	452	312	259	302	333	292	336	387	390	473
ERCOT	256	109	95	85	110	108	92	86	99	89	83
MAAC	1611	467	413	346	382	434	549	521	744	1050	937
MAIN	49	48	99	41	59	30	61	64	86	100	204
Cmnwlth Edison	8	0	0	0	5	10	10	15	25	35	30
East Missouri	6	2	44	20	43	12	43	40	48	52	163
S Cent Illinois	2	3	4	5	3	3	4	5	9	9	7
Wis-Upper Mich	33	43	51	16	8	5	4	4	4	4	4
MAPP	42	68	76	76	93	91	113	138	175	212	269
NPCC	2123	1222	950	858	937	969	952	984	1012	1046	1088
New York	1420	640	376	300	350	350	300	300	300	300	300
NEPOOL	703	582	574	558	587	619	652	684	712	746	788
SERC	1328	411	571	686	823	1519	2715	3450	4098	6066	6541
Florida	847	266	365	366	313	435	717	886	1330	2217	2318
Southern	73	10	10	29	28	20	19	16	14	15	14
TVA	112	38	117	216	418	949	1705	2199	2371	2744	2792
VACAR	296	97	79	75	64	115	274	349	383	1090	1417
SPP	45	71	73	84	73	70	90	77	59	128	185
Southeast	17	0	0	10	0	3	35	14	1	17	30
West Central	15	6	6	6	4	4	4	3	3	3	3
Northern	13	65	67	68	69	63	51	60	55	108	152
WSCC	86	490	1073	1136	952	736	779	798	828	831	864
NW Pool	9	0	491	493	491	491	491	493	491	491	491
Rocky Mt Area	0	2	2	3	3	31	62	70	90	108	126
Ariz-N. Mex	0	5	27	3	3	15	26	30	39	26	40
Calif-So. Nev	77	483	553	637	455	199	200	205	208	206	207
TOTAL(U.S.)	5627	3338	3662	3571	3731	4290	5643	6454	7488	9912	10644
Canada											
MAPP	16	19	20	20	21	21	22	22	22	23	23
NPCC	112	465	510	419	494	360	577	490	547	405	387
New Brunswick	9	87	89	169	244	230	400	271	224	150	134
Nova Scotia	68	365	408	237	237	117	147	190	233	161	210
Ontario	35	13	13	13	13	13	30	29	90	94	43
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	128	484	530	439	515	381	599	512	569	428	410
Mexico											
WSCC	31	246	0	0	0	0	0	0	0	0	0
NERC-Total	5786	4068	4192	4010	4246	4671	6242	6966	8057	10340	11054
ASCC	124	123	129	135	141	148	154	161	168	176	185

---

[a] Includes diesel units.

Actual and Projected Electrical Energy Produced by Oil-Combined Cycle
Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	67	71	113	115	100	212	218
ERCOT	5	0	0	0	0	0	0	0	0	0	0
MAAC	491	125	121	95	124	116	152	141	152	112	150
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	1	0	0	0	0	0	0	0	0	0	0
NPCC	879	728	718	698	734	775	815	856	890	932	986
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	879	728	718	698	734	775	815	856	890	932	986
SERC	23	0	0	0	0	0	0	0	79	225	411
Florida	23	0	0	0	0	0	0	0	79	225	411
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	1	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	1	0	0	0	0	0	0	0	0	0	0
WSCC	33	6	6	7	7	7	7	7	7	7	8
NW Pool	29	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	4	6	6	7	7	7	7	7	7	7	8
TOTAL(U.S.)	1433	859	845	800	932	969	1087	1119	1228	1488	1773
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	1433	859	845	800	932	969	1087	1119	1228	1488	1773
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Electrical Energy Produced by Gas[a] – Millions kWh

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	510	677	670	628	594	909	1025	1560	2096	1634	1972
ERCOT	81026	69715	75289	73216	78756	82206	85403	84662	86528	88339	89133
MAAC	7459	10704	10658	10647	11969	12967	15718	16357	19890	20277	22614
MAIN	544	107	207	305	493	393	653	913	1295	1435	2033
Cmnwlth Edison	343	0	5	5	15	20	30	30	60	75	145
East Missouri	39	10	45	124	197	53	154	142	134	170	439
S Cent Illinois	38	35	69	65	75	82	141	242	389	445	457
Wis-Upper Mich	124	62	88	111	206	238	328	499	712	745	992
MAPP	307	516	527	583	634	645	728	857	1009	993	1091
NPCC	22504	21570	21717	21656	22798	22927	22718	22952	23393	23889	24180
New York	17220	17191	17403	17459	18385	18270	17818	17809	18041	18285	18254
NEPOOL	5284	4379	4314	4197	4413	4657	4900	5143	5352	5604	5926
SERC	20169	19968	19782	20684	22362	22823	24115	24360	24697	26047	27196
Florida	17358	17585	17670	17768	18956	19285	20168	20070	20874	21470	21579
Southern	2421	1768	1064	1205	1238	1854	2102	2240	2672	3421	4431
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	390	615	1048	1711	2168	1684	1845	2050	1151	1156	1186
SPP	62741	57040	54504	56283	54543	55318	58511	61907	65088	70017	72588
Southeast	38636	35218	33355	32875	30903	31089	32908	34791	36380	38908	41277
West Central	22928	20666	19907	22167	21994	22288	23634	24725	26197	28620	28635
Northern	1177	1156	1242	1241	1646	1941	1969	2391	2511	2489	2676
WSCC	63218	43437	46689	50751	53687	58662	60293	62705	68104	71613	73739
NW Pool	3551	5752	7183	7361	7280	7315	7192	7290	7350	7744	7731
Rocky Mt Area	259	230	219	212	270	209	205	206	513	552	601
Ariz-N. Mex	8094	4353	4930	4224	5025	5706	6474	6266	7597	7420	8426
Calif-So. Nev	51314	33102	34357	38954	41112	45432	46422	48943	52644	55897	56981
TOTAL(U.S.)	258478	223734	230043	234753	245836	256850	269164	276273	292100	304244	314546
Canada											
MAPP	714	714	714	640	310	393	417	423	205	260	301
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	8439	4914	4530	4794	6079	7182	6507	8161	8781	9266	9568
TOTAL(Canada)	9153	5628	5244	5434	6389	7575	6924	8584	8986	9526	9869
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	267631	229362	235287	240187	252225	264425	276088	284857	301086	313770	324415
ASCC	2718	2799	2657	2468	2476	2506	2548	2590	2624	2665	2720

---

[a] Gas-fired steam, combustion turbine (and diesel), and combined cycle units.

Actual and Projected Electrical Energy Produced by Gas-Steam - Millions kWh

(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	438	479	446	305	314	425	346	388	479	275	365
ERCOT	77893	66257	71331	69437	74384	76865	78748	75439	75013	75334	73957
MAAC	6017	7079	6862	7303	7707	9098	10157	10085	10821	9754	9978
MAIN	507	48	108	195	291	140	210	223	269	307	550
Cmnwlth Edison	340	0	0	0	0	0	0	0	0	0	0
East Missouri	39	9	44	123	196	52	153	141	133	169	438
S Cent Illinois	33	18	37	34	38	37	43	67	117	119	94
Wis-Upper Mich	95	21	27	38	57	51	14	15	19	19	18
MAPP	245	364	391	447	466	438	464	510	627	539	551
NPCC	21023	20367	20447	20224	21265	21376	21160	21382	21794	22254	22512
New York	16360	16503	16640	16521	17370	17267	16836	16843	17071	17309	17283
NEPOOL	4663	3864	3807	3703	3895	4109	4324	4539	4723	4945	5229
SERC	16772	14757	14019	14123	10424	10299	10211	10294	10407	10538	10633
Florida	14361	13527	13573	13544	9829	9678	9576	9617	9616	9683	9661
Southern	2054	1230	446	579	595	621	635	677	791	855	972
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	357	0	0	0	0	0	0	0	0	0	0
SPP	58212	52313	49591	51298	49517	50286	53268	56480	59699	63752	66542
Southeast	37322	33686	31828	31338	29403	29602	31414	33232	34793	37262	39542
West Central	19780	17549	16605	18823	18605	18912	20147	21372	22921	24508	24919
Northern	1110	1078	1158	1137	1509	1772	1707	1876	1985	1982	2081
WSCC	54476	38009	39439	44111	46366	50599	49275	50169	53985	57280	57994
NW Pool	1477	3587	3681	3839	3776	3811	3688	3768	3846	4240	4257
Rocky Mt Area	247	207	197	203	201	200	200	200	200	200	200
Ariz-N. Mex	4510	2027	2269	2099	2465	2781	3013	2944	3599	3439	3783
Calif-So. Nev	48242	32188	33292	37970	39324	43807	42374	43257	46340	49401	49754
TOTAL(U.S.)	235583	199673	202634	207443	210734	219526	223839	224970	233094	240033	243082
Canada											
MAPP	467	467	467	429	188	203	213	209	114	144	167
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	7831	4498	4191	4380	5556	6455	5545	7109	7668	7968	8240
TOTAL(Canada)	8298	4965	4658	4809	5744	6658	5758	7318	7782	8112	8407
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	243881	204638	207292	212252	216478	226184	229597	232288	240876	248145	251489
ASCC	0	0	0	0	0	0	0	0	0	0	0

Electrical Energy Production

Actual and Projected Electrical Energy Produced by Gas-Combustion Turbine[a]
Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	72	198	224	323	280	441	615	1099	1509	1107	1345
ERCOT	493	859	983	889	1323	1718	1597	1453	1642	1643	1895
MAAC	1052	2502	2706	2492	3147	2824	4197	4248	5537	6024	6421
MAIN	37	59	99	110	202	243	393	590	876	928	1076
Cmnwlth Edison	3	0	5	5	15	20	30	30	60	75	145
East Missouri	0	1	1	1	1	1	1	1	1	1	1
S Cent Illinois	5	17	32	31	37	35	48	75	122	126	103
Wis-Upper Mich	29	41	61	73	149	187	314	484	693	726	827
MAPP	43	132	116	116	148	205	261	344	379	450	535
NPCC	889	712	787	962	1039	1029	1009	994	999	1007	1004
New York	860	688	763	938	1015	1003	982	966	970	976	971
NEPOOL	29	24	24	24	24	26	27	28	29	31	33
SERC	678	854	954	877	870	1086	1276	1364	1665	2243	2846
Florida	278	203	256	168	154	221	354	415	504	565	571
Southern	367	538	618	626	623	739	793	826	1069	1584	2149
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	33	113	80	83	93	126	129	123	92	94	126
SPP	155	93	108	119	114	139	226	438	432	420	591
Southeast	10	10	10	10	10	10	10	10	10	10	110
West Central	84	6	13	5	4	5	17	19	22	33	33
Northern	61	77	85	104	100	124	199	409	400	377	448
WSCC	1300	989	1734	1622	1482	1206	1221	1323	1716	2056	2335
NW Pool	836	302	880	887	885	885	885	887	885	885	855
Rocky Mt Area	12	23	22	9	69	9	5	6	313	352	401
Ariz-N. Mex	269	70	114	113	145	203	234	331	419	708	987
Calif-So. Nev	183	594	718	613	383	109	97	99	99	111	92
TOTAL(U.S.)	4719	6398	7711	7510	8605	8891	10795	11853	14755	15878	18048
Canada											
MAPP	247	247	247	211	122	190	204	214	91	116	134
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	608	416	339	414	523	727	962	1052	1113	1298	1328
TOTAL(Canada)	855	663	586	625	645	917	1166	1266	1204	1414	1462
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	5574	7061	8297	8135	9250	9808	11961	13119	15959	17292	19510
ASCC	860	824	492	316	478	475	602	645	656	696	573

---

[a] Includes diesel units.

Actual and Projected Electrical Energy Produced by Gas-Combined Cycle

Millions kWh

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	43	64	73	108	252	262
ERCOT	2640	2599	2975	2890	3049	3623	5058	7770	9873	11362	13281
MAAC	390	1123	1090	852	1115	1045	1364	2024	3532	4499	6215
MAIN	0	0	0	0	0	10	50	100	150	200	407
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	10	50	100	150	200	260
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	147
MAPP	19	20	20	20	20	2	3	3	3	4	5
NPCC	592	491	483	470	494	522	549	576	600	628	664
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	592	491	483	470	494	522	549	576	600	628	664
SERC	2719	4357	4809	5684	11068	11438	12628	12702	12625	13266	13717
Florida	2719	3855	3841	4056	8973	9386	10238	10038	10754	11222	11347
Southern	0	0	0	0	20	494	674	737	812	982	1310
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	502	968	1628	2075	1558	1716	1927	1059	1062	1060
SPP	4374	4634	4805	4866	4912	4893	5017	4989	4957	5845	5455
Southeast	1304	1522	1517	1527	1490	1477	1484	1549	1577	1636	1625
West Central	3064	3111	3289	3339	3385	3371	3470	3334	3254	4079	3683
Northern	6	1	-1	0	37	45	63	106	126	130	147
WSCC	7442	4439	5516	5018	5839	6857	9797	11213	12403	12277	13410
NW Pool	1238	1863	2622	2635	2619	2619	2619	2635	2619	2619	2619
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	3315	2256	2547	2012	2415	2722	3227	2991	3579	3273	3656
Calif-So. Nev	2889	320	347	371	805	1516	3951	5587	6205	6385	7135
TOTAL(U.S.)	18176	17663	19698	19800	26497	28433	34530	39450	44251	48333	53416
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	18176	17663	19698	19800	26497	28433	34530	39450	44251	48333	53416
ASCC	1858	1975	2165	2152	1938	2031	1946	1945	1968	1969	2147

Actual and Projected Electrical Energy Produced by Geothermal – Millions kWh

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC	10620	11190	10545	9991	9705	9189	8999	8521	8330	8025	7795
NW Pool	161	188	237	244	243	243	243	243	242	242	242
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	10459	11002	10308	9747	9462	8946	8756	8278	8088	7783	7553
TOTAL(U.S.)	10620	11190	10545	9991	9705	9189	8999	8521	8330	8025	7795
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	4056	4220	4230	4300	4600	5000	5000	5000	5000	5000	5000
NERC-Total	14676	15410	14775	14291	14305	14189	13999	13521	13330	13025	12795
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Electrical Energy Produced by Other Utility Fuels – Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	39	53	101	80	106
ERCOT	1348	2093	1703	1699	1876	2337	2697	3570	4249	4375	5594
MAAC[a]	1373	1164	1199	797	814	824	852	851	878	876	879
MAIN	0	564	563	566	573	566	564	572	563	558	568
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	564	563	566	573	566	564	572	563	558	568
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	434	558	564	545	558	565	581	601	596	611	609
NPCC	201	480	950	1400	1830	2240	2650	3070	3450	3770	4000
New York	0	280	750	1200	1630	2040	2450	2870	3250	3570	3800
NEPOOL	201	200	200	200	200	200	200	200	200	200	200
SERC	0	1	10	18	5	147	221	345	304	441	473
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	125	140	140	140	200	210
TVA	0	1	10	18	5	22	81	205	164	241	263
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	189	313	313	314	313	313	313	314	313	313	313
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	189	313	313	314	313	313	313	314	313	313	313
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC[b,c]	1618	2130	2869	3295	5674	8410	9551	11589	14725	18833	20704
NW Pool[b]	858	734	1365	1751	4104	6829	7947	9937	12606	15488	16997
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	4	4	29	53	96	120
Calif-So. Nev[c]	760	1396	1504	1544	1570	1577	1600	1623	2066	3249	3587
TOTAL(U.S.)[a,b,c]	5163	7303	8171	8634	11643	15402	17468	20965	25179	29857	33246
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	297	45	0	0	0	0	0	0	0	0	0
New Brunswick	297	45	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	413	0	0	0	20	134	497	1070	1769	2443	3420
TOTAL(Canada)	710	45	0	0	20	134	497	1070	1769	2443	3420
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[a,b,c]	5873	7348	8171	8634	11663	15536	17965	22035	26948	32300	36666
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Includes Bethlehem Steel and Delaware City 1 & 2.

[b] The U.S. portion of the Northwest Power Pool (NWPP) is projecting an energy deficiency under adverse hydro conditions for 1991 through 1999. Included are imports that would be necessary from systems outside of NWPP(U.S.) ranging from 587(1991) to 16,155(1999) millions of kWh.

[c] Excludes the excess of pumped storage generation over pumped storage load in WSCC–U.S.

Actual and Projected Electrical Energy Produced by Non-Utility Generators (NUGs)
Millions kWh
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	2076	7095	8019	12605	13730	14117	14603	16208	16414	16705	17233
ERCOT	19806	20695	22086	21503	20678	19171	15782	15877	15770	15152	14474
MAAC	8330	8310	12712	19970	23883	27052	27889	28350	28642	29022	29088
MAIN	94	27	27	347	332	334	337	371	822	1177	1364
Cmnwlth Edison	58	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	17	9	9	9	9	9	9	9	9	9	9
Wis-Upper Mich	19	18	18	338	323	325	328	362	813	1168	1355
MAPP	3	23	23	24	24	25	25	26	26	27	27
NPCC	7768	15568	18672	32603	40198	42580	42699	42814	42869	43644	44158
New York	2766	5195	7896	21424	28617	30596	30800	31000	31140	32000	32599
NEPOOL	5002	10373	10776	11179	11581	11984	11899	11814	11729	11644	11559
SERC	9375	10352	12166	15400	19450	19909	23841	29096	31423	34798	35673
Florida	2136	2065	2150	3907	6305	6721	8745	10021	10303	10507	10593
Southern	225	187	187	187	187	187	187	187	187	187	187
TVA	854	745	745	219	0	0	0	0	0	0	0
VACAR	6160	7355	9084	11087	12958	13001	14909	18888	20933	24104	24893
SPP	2699	3104	5116	5124	5122	5125	5128	5136	5134	5137	5140
Southeast	2086	1920	1920	1924	1920	1920	1920	1924	1920	1920	1920
West Central	579	1147	3156	3157	3156	3156	3156	3157	3156	3156	3156
Northern	34	37	40	43	46	49	52	55	58	61	64
WSCC	38893	50354	53910	59531	63415	65544	68188	68725	70097	70925	71052
NW Pool	2233	4787	5837	6668	6768	6878	6992	7118	8220	8330	8330
Rocky Mt Area	982	1309	1531	1973	2482	2602	3219	3259	3259	3259	3259
Ariz-N. Mex	2408	2039	1779	1991	2066	2276	2471	2362	2189	2529	2506
Calif-So. Nev	33270	42219	44763	48899	52099	53788	55506	55986	56429	56807	56957
TOTAL(U.S.)	89044	115528	132731	167107	186832	193857	198492	206603	211197	216587	218209
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	286	812	2272	3746	5278	6412	6973	7449	7948	8480	9056
New Brunswick	44	52	52	52	82	227	227	227	227	227	227
Nova Scotia	0	0	0	0	29	134	210	210	210	210	210
Ontario	242	560	1720	2294	2867	3351	3836	4312	4811	5343	5919
Quebec	0	200	500	1400	2300	2700	2700	2700	2700	2700	2700
WSCC	0	0	146	578	800	748	578	578	895	1843	1132
TOTAL(Canada)	286	812	2418	4324	6078	7160	7551	8027	8843	10323	10188
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	89330	116340	135149	171431	192910	201017	206043	214630	220040	226910	228397
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Electrical Energy Requirements for Pumped Storage Load (Input) – Millions kWh

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	5368	6296	5620	5423	5671	5810	6071	6348	6459	6674	6511
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	2987	2821	3609	3681	3662	2960	2943	2959	2931	2934	2926
MAIN	52	37	73	112	105	101	122	115	115	115	166
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	52	37	73	112	105	101	122	115	115	115	166
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	4419	2611	2991	3069	3095	2891	1661	1911	1770	1753	1855
New York	2147	536	387	527	468	415	410	395	290	383	436
NEPOOL	2272	2075	2604	2542	2627	2476	1251	1516	1480	1370	1419
SERC	7692	4200	4950	6216	6682	7711	7755	8588	9001	9506	9807
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	255	251	536	537	512	485	202	1053	1284	1444	1620
TVA	2515	1362	1772	2152	2425	2768	2977	3231	3300	3417	3528
VACAR	4922	2587	2642	3527	3745	4458	4576	4304	4417	4645	4659
SPP	101	145	145	145	145	145	145	145	145	145	145
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	101	145	145	145	145	145	145	145	145	145	145
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC	2713	2062	1902	1920	1859	1919	1859	1759	1731	1908	2015
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	269	537	646	476	485	616	615	629	634	598	584
Ariz-N. Mex	101	393	154	281	257	247	190	187	144	143	134
Calif-So. Nev	2343	1132	1102	1163	1117	1056	1054	943	953	1167	1297
TOTAL(U.S.)	23332	18172	19290	20566	21219	21537	20556	21825	22152	23035	23425
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	23332	18172	19290	20566	21219	21537	20556	21825	22152	23035	23425
ASCC	0	0	0	0	0	0	0	0	0	0	0

Actual and Projected Electrical Energy Produced (Output) by Pumped Storage
Millions kWh
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	4046	4652	4173	4053	4231	4332	4512	4707	4782	4925	4798
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	2055	1967	2529	2580	2567	2063	2051	2063	2044	2045	2040
MAIN	12	19	38	60	55	54	66	61	62	62	88
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	12	19	38	60	55	54	66	61	62	62	88
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	3066	1912	2199	2252	2274	2125	1214	1400	1299	1283	1356
New York	1408	375	270	369	328	291	287	277	203	268	305
NEPOOL	1658	1537	1929	1883	1946	1834	927	1123	1096	1015	1051
SERC	5967	3263	3856	4825	5183	5993	6042	6704	7024	7424	7649
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	186	189	416	419	396	381	170	861	1045	1178	1315
TVA	1958	1055	1372	1666	1878	2143	2305	2502	2555	2646	2732
VACAR	3823	2019	2068	2740	2909	3469	3567	3341	3424	3600	3602
SPP	56	75	75	75	75	75	75	75	75	75	75
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	56	75	75	75	75	75	75	75	75	75	75
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC[a]	3049	3205	3324	3292	3297	3373	3466	3470	3478	3679	3752
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	225	444	520	400	404	491	490	500	503	478	469
Ariz-N. Mex	72	194	84	142	154	200	196	205	207	230	244
Calif-So. Nev[a]	2752	2567	2720	2750	2739	2682	2780	2765	2768	2971	3039
TOTAL(U.S.)	18251	15093	16194	17137	17682	18015	17426	18480	18764	19493	19758
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	18251	15093	16194	17137	17682	18015	17426	18480	18764	19493	19758
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Pumped storage generation (output) is greater than pumped storage load (input) due to pumped storage facilities being in combination with California reservoirs.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Western Lignite[b] (Steam) - 1000s Tons
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR[c]	0	0	0	0	0	0	0	0	0	0	0
ERCOT	47313	46279	46960	46357	46097	46414	50724	54646	58987	62666	65361
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	17286	18348	18843	18828	18719	18934	18920	19052	19018	19087	19072
NPCC	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	10210	10468	10871	10984	11120	11236	11155	11323	11396	11355	11528
Southeast	2119	2193	2162	2202	2077	2198	2204	2185	2209	2200	2084
West Central	4278	4225	4697	4697	4697	4697	4697	4697	4697	4697	4697
Northern	3813	4050	4012	4085	4346	4341	4254	4441	4490	4458	4747
WSCC	0	0	0	0	0	0	0	0	0	0	0
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)[c]	74809	75095	76674	76169	75936	76584	80799	85021	89401	93108	95961
Canada											
MAPP	9321	9306	9306	9602	10355	10532	10576	10994	11979	12079	11891
NPCC	1752	1801	985	987	949	976	1200	1418	1514	1453	1228
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario[d]	1752	1801	985	987	949	976	1200	1418	1514	1453	1228
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	11073	11107	10291	10589	11304	11508	11776	12412	13493	13532	13119
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[c]	85882	86202	86965	86758	87240	88092	92575	97433	102894	106640	109080
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Excludes coal requirements of non-utility generators (NUGs).

[b] Coal mined west of the Mississippi River.

[c] Coal sources for ECAR are not identified. See Table 20 for ECAR total coal figures.

[d] Coal mined in western Canada.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Western Coal[b] (Steam) – 1000s Tons
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR[c]	0	0	0	0	0	0	0	0	0	0	0
ERCOT	21594	21569	21981	22958	24176	24452	24802	25108	25303	26175	28810
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	19837	20840	21195	22188	24352	25323	26157	26909	27725	28402	28197
Cmnwlth Edison	6314	6284	6513	7056	7465	7715	7759	8299	9056	9416	9646
East Missouri	1829	2232	2336	2311	3139	3069	3283	3273	3376	3486	2991
S Cent Illinois	60	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	11634	12324	12346	12821	13748	14539	15115	15337	15293	15500	15558
MAPP	37071	36899	37962	35272	37138	37730	36914	38323	39141	39020	40184
NPCC	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	68907	71492	72881	75367	76149	78091	79495	82286	83227	84177	85473
Southeast	20724	20337	22947	24869	24737	24518	25234	25800	25899	26961	26974
West Central	28308	30434	29030	29503	30221	32215	32830	34401	34511	33977	34693
Northern	19875	20721	20904	20995	21191	21358	21431	22085	22817	23239	23806
WSCC[d]	104124	97740	98877	99420	101791	102302	103465	104992	105473	106419	108873
NW Pool	41369	42360	42241	42486	43316	42657	42511	43065	42610	42356	43342
Rocky Mt Area	19262	19222	19373	19022	19182	19598	19703	19902	20154	20531	20971
Ariz-N. Mex[d]	26471	21088	22361	23079	24066	24840	25602	26342	26614	27473	27923
Calif-So. Nev	17022	15070	14902	14833	15227	15207	15649	15683	16095	16059	16637
TOTAL(U.S.)[c]	251533	248540	252896	255205	263606	267898	270833	277618	280869	284193	291537
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	3123	3545	3342	2864	2750	1547	3000	3600	3600	3600	3600
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario[e]	3123	3545	3342	2864	2750	1547	3000	3600	3600	3600	3600
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	24312	25177	26880	27905	28517	28929	29083	29230	29332	29403	29391
TOTAL(Canada)	27435	28722	30222	30769	31267	30476	32083	32830	32932	33003	32991
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[c]	278968	277262	283118	285974	294873	298374	302916	310448	313801	317196	324528
ASCC	270	280	280	280	280	280	280	280	280	280	280

[a] Excludes coal requirements of non-utility generators (NUGs).

[b] Coal mined west of the Mississippi River.

[c] Coal sources for ECAR are not identified. See Table 20 for ECAR total coal figures.

[d] Includes coal requirements for the 360 MW Springerville 1 coal-fired non-utility generator in the Arizona-New Mexico Power Area of WSCC-U.S.

[e] Coal from western Canada.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Other Coal (Steam) - 1000s Tons
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR[b]	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	42925	39860	40068	41624	41784	41898	43361	43870	43417	44725	45644
MAIN	32312	31815	31719	33072	32387	32524	33095	32772	33194	33724	34176
Cmnwlth Edison	2159	2299	2339	2321	2050	2445	2444	2478	2527	2219	2577
East Missouri	9462	8555	8485	9175	8980	8745	9520	9565	9198	9710	10035
S Cent Illinois	14899	15482	15379	15605	15801	16055	16133	15538	16058	16298	15871
Wis-Upper Mich	5792	5479	5516	5971	5556	5279	4998	5191	5411	5497	5693
MAPP	6571	6487	6507	6597	6613	6786	6705	6896	6917	6846	7019
NPCC	18758	19610	19629	19207	19288	19304	19277	19015	19240	19172	19391
New York	12269	12340	12359	11937	12018	12034	12007	11745	11970	11902	12121
NEPOOL	6489	7270	7270	7270	7270	7270	7270	7270	7270	7270	7270
SERC	142455	147316	149839	154532	157070	159444	161778	169212	171400	180021	183521
Florida	21203	22557	23598	22921	23126	23407	23314	25806	26834	29168	30028
Southern	48660	48160	49906	52249	52526	53651	55306	56968	58504	60907	62068
TVA	32149	36478	36544	37016	37427	37428	36042	37772	36403	38459	38838
VACAR	40443	40121	39791	42346	43991	44958	47116	48666	49659	51487	52587
SPP	4251	3958	4393	4092	4666	4687	4796	4909	4785	4841	4941
Southeast	202	203	203	3	3	3	3	3	3	3	3
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	4049	3755	4190	4089	4663	4684	4793	4906	4782	4838	4938
WSCC	0	0	0	0	0	0	0	0	0	0	0
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)[b]	247272	249046	252155	259124	261808	264643	269012	276674	278953	289329	294692
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	12378	11152	12286	11895	12351	13885	13920	14211	15357	17390	15878
New Brunswick[c]	772	612	557	538	775	1784	2233	2278	2488	3234	3310
Nova Scotia[c]	2361	2750	2938	3143	3730	3799	3546	3621	3770	4019	4158
Ontario[d]	9245	7790	8791	8214	7846	8302	8141	8312	9099	10137	8410
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	12378	11152	12286	11895	12351	13885	13920	14211	15357	17390	15878
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[b]	259650	260198	264441	271019	274159	278528	282932	290885	294310	306719	310570
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Excludes coal requirements of non-utility generators (NUGs).

[b] Coal sources for ECAR are not identified. See Table 20 for ECAR total coal figures.

[c] Coal from Canada.

[d] Bituminous coal from the United States.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Total Distillate Oil[b,c] – 1000s Barrels
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	2567	5160	4550	3404	3867	4234	4303	5104	5771	6002	5977
ERCOT	2315	815	787	773	829	825	789	775	800	790	836
MAAC	5686	1564	1431	1246	1374	1544	2193	2106	2735	3476	3195
MAIN	644	442	679	677	895	525	835	800	909	995	1806
Cmnwlth Edison	306	1	3	6	16	24	36	40	73	97	93
East Missouri	73	101	284	409	633	224	521	490	504	578	1423
S Cent Illinois	136	122	164	166	169	180	179	170	230	217	186
Wis-Upper Mich	129	218	228	96	77	97	99	100	102	103	104
MAPP	864	795	829	810	856	868	897	921	1013	1133	1224
NPCC	4648	2442	3126	2874	3107	3231	3232	3356	3461	3590	3754
New York	3499	1491	929	738	861	861	738	738	738	738	738
NEPOOL	1149	951	2197	2136	2246	2370	2494	2618	2723	2852	3016
SERC	4668	2110	2407	2477	2711	3941	5713	7054	8203	11583	12752
Florida	2397	462	583	549	413	513	803	947	1756	3633	4053
Southern	460	347	351	405	399	378	374	369	363	366	363
TVA	590	460	585	679	1045	2063	3438	4426	4729	5414	5548
VACAR	1221	841	888	844	854	987	1098	1312	1355	2170	2788
SPP	841	333	316	354	326	343	410	387	374	417	498
Southeast	482	59	64	85	61	67	146	95	62	100	169
West Central	119	90	74	74	68	68	68	79	99	99	99
Northern	240	184	178	195	197	208	196	213	213	218	230
WSCC	308	1069	2247	2425	2071	1685	1871	1927	2006	2126	2222
NW Pool	86	0	982	986	982	982	982	986	982	982	982
Rocky Mt Area	28	26	26	35	35	95	164	181	224	264	302
Ariz-N. Mex	0	46	122	131	126	164	278	305	339	424	480
Calif-So. Nev	194	997	1117	1273	928	444	447	455	461	456	458
TOTAL(U.S.)	22541	14730	16372	15040	16036	17196	20243	22430	25272	30112	32264
Canada											
MAPP	46	52	54	53	55	56	59	59	61	62	61
NPCC	3044	4950	771	801	874	775	1425	1321	1490	1165	1153
New Brunswick	51	174	181	292	418	394	686	465	384	225	232
Nova Scotia	149	151	293	195	160	99	380	490	601	415	543
Ontario	344	325	297	314	296	282	359	366	505	525	378
Quebec	2500	4300	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	3090	5002	825	854	929	831	1484	1380	1551	1227	1214
Mexico											
WSCC	92	720	0	0	0	0	0	0	0	0	0
NERC-Total	25723	20452	17197	15894	16965	18027	21727	23810	26823	31339	33478
ASCC	18	16	15	15	15	15	15	15	15	15	15

[a] Excludes the distillate oil requirements of non-utility generators (NUGs).

[b] Includes No.1 and No.2 oil, kerosene, and jet fuel.

[c] Used in steam, combustion turbine (and diesel), and combined cycle units and in coal burning plants for startup and flame stabilization.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Distillate Oil[b] (Steam) - 1000s Barrels
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	2376	4216	3864	2834	3203	3501	3661	4365	4920	5144	4936
ERCOT	2117	594	595	602	606	607	603	602	600	610	668
MAAC	1217	546	638	632	630	631	673	660	711	755	718
MAIN	548	280	381	570	722	423	630	585	586	646	1241
Cmnwlth Edison	280	0	0	0	0	0	0	0	0	0	0
East Missouri	62	96	181	363	532	202	420	396	395	458	1051
S Cent Illinois	132	99	125	125	129	140	127	105	105	101	102
Wis-Upper Mich	74	85	75	82	61	81	83	84	86	87	88
MAPP	701	641	647	642	644	649	649	649	660	688	699
NPCC	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	1393	1374	1414	1391	1374	1430	1378	1399	1494	1642	1672
Florida	344	152	175	169	158	180	233	238	323	435	452
Southern	273	307	312	313	313	313	313	314	314	314	314
TVA	342	389	390	396	382	398	386	402	400	406	411
VACAR	434	526	537	513	521	539	446	445	457	487	495
SPP	691	248	237	239	240	243	242	261	287	290	330
Southeast	427	58	64	60	60	60	58	59	59	58	92
West Central	113	73	57	57	57	57	57	68	90	90	90
Northern	151	117	116	122	123	126	127	134	138	142	148
WSCC	28	59	78	155	150	164	251	268	287	396	422
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	28	24	24	30	30	30	30	30	30	30	30
Ariz-N. Mex	0	35	54	125	120	134	221	238	257	366	392
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	9071	7958	7854	7065	7569	7648	8087	8789	9545	10171	10686
Canada											
MAPP	11	11	11	10	10	11	11	11	13	12	11
NPCC	2769	4581	253	270	252	238	270	280	280	290	250
New Brunswick	29	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	240	281	253	270	252	238	270	280	280	290	250
Quebec	2500	4300	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	2780	4592	264	280	262	249	281	291	293	302	261
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	11851	12550	8118	7345	7831	7897	8368	9080	9838	10473	10947
ASCC	5	5	5	5	5	5	5	5	5	5	5

---

[a] See page 98, footnote a.

[b] See page 98, footnote b.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Distillate Oil[b] (Combustion Turbine)[c] – 1000s Barrels
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	191	944	686	570	664	733	642	739	851	858	1041
ERCOT	198	221	192	171	223	218	186	173	200	180	168
MAAC	3867	824	604	466	551	732	1284	1227	1786	2546	2243
MAIN	96	162	298	107	173	102	205	215	323	349	565
Cmnwlth Edison	26	1	3	6	16	24	36	40	73	97	93
East Missouri	11	5	103	46	101	22	101	94	109	120	372
S Cent Illinois	4	23	39	41	40	40	52	65	125	116	84
Wis-Upper Mich	55	133	153	14	16	16	16	16	16	16	16
MAPP	160	154	182	168	212	219	248	272	353	445	525
NPCC	3758	1662	1905	1687	1859	1913	1846	1901	1948	2006	2078
New York	3499	1491	929	738	861	861	738	738	738	738	738
NEPOOL	259	171	976	949	998	1052	1108	1163	1210	1268	1340
SERC	3225	736	993	1086	1337	2511	4335	5655	6592	9604	10471
Florida	2003	310	408	380	255	333	570	709	1316	2861	2992
Southern	187	40	39	92	86	65	61	55	49	52	49
TVA	248	71	195	283	663	1665	3052	4024	4329	5008	5137
VACAR	787	315	351	331	333	448	652	867	898	1683	2293
SPP	127	85	79	115	86	100	168	126	87	127	168
Southeast	35	1	0	25	1	7	88	36	3	42	77
West Central	6	17	17	17	11	11	11	11	9	9	9
Northern	86	67	62	73	74	82	69	79	75	76	82
WSCC	199	1010	2169	2270	1921	1521	1620	1659	1719	1730	1800
NW Pool	15	0	982	986	982	982	982	986	982	982	982
Rocky Mt Area	0	2	2	5	5	65	134	151	194	234	272
Ariz-N. Mex	0	11	68	6	6	30	57	67	82	58	88
Calif-So. Nev	184	997	1117	1273	928	444	447	455	461	456	458
TOTAL(U.S.)	11821	5798	7108	6640	7026	8049	10534	11967	13859	17845	19059
Canada											
MAPP	35	41	43	43	45	45	48	48	48	50	50
NPCC	275	369	518	531	622	537	1155	1041	1210	875	903
New Brunswick	22	174	181	292	418	394	686	465	384	225	232
Nova Scotia	149	151	293	195	160	99	380	490	601	415	543
Ontario	104	44	44	44	44	44	89	86	225	235	128
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	310	410	561	574	667	582	1203	1089	1258	925	953
Mexico											
WSCC	92	720	0	0	0	0	0	0	0	0	0
NERC-Total	12223	6928	7669	7214	7693	8631	11737	13056	15117	18770	20012
ASCC	13	11	10	10	10	10	10	10	10	10	10

[a] See page 98, footnote a.
[b] See page 98, footnote b.
[c] Includes diesel units.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production Distillate Oil[b] (Combined Cycle) – 1000s Barrels

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	602	194	189	148	193	181	236	219	238	175	234
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	3	0	0	0	0	0	0	0	0	0	0
NPCC	890	780	1221	1187	1248	1318	1386	1455	1513	1584	1676
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	890	780	1221	1187	1248	1318	1386	1455	1513	1584	1676
SERC	50	0	0	0	0	0	0	0	117	337	609
Florida	50	0	0	0	0	0	0	0	117	337	609
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	23	0	0	0	0	0	0	0	0	0	0
Southeast	20	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	3	0	0	0	0	0	0	0	0	0	0
WSCC	81	0	0	0	0	0	0	0	0	0	0
NW Pool	71	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	10	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	1649	974	1410	1335	1441	1499	1622	1674	1868	2096	2519
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	1649	974	1410	1335	1441	1499	1622	1674	1868	2096	2519
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] See page 98, footnote a.

[b] See page 98, footnote b.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Total Residual Oil[b,c] – 1000s Barrels
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	1690	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
ERCOT	1215	354	354	363	354	355	356	358	356	352	351
MAAC	34778	19471	20622	16257	20191	22436	27478	27153	30715	31321	30228
MAIN	1534	384	494	612	1077	1276	1551	1722	2576	2885	3204
Cmnwlth Edison	1330	241	269	382	830	1014	1242	1365	1978	2277	2715
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	204	143	225	230	247	262	309	357	598	608	489
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	64	40	42	37	47	42	54	59	92	58	4
NPCC	123235	123421	116398	99021	94098	90778	96730	93227	100035	100567	110465
New York	63526	66720	65864	49876	42399	36244	39345	32982	37344	34933	41062
NEPOOL	59709	56701	50534	49145	51699	54534	57385	60245	62691	65634	69403
SERC	47030	47266	50966	51151	51735	55551	58441	56850	60745	68560	70838
Florida	40798	41505	43963	44477	45106	50303	52735	48724	54790	60038	61888
Southern	36	88	35	26	46	44	85	180	181	305	390
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	6196	5673	6968	6648	6583	5204	5621	7946	5774	8217	8560
SPP	1629	54	88	108	82	121	185	202	252	226	238
Southeast	1595	2	2	3	3	3	3	3	3	7	7
West Central	13	11	11	11	11	11	11	22	43	44	44
Northern	21	41	75	94	68	107	171	177	206	175	187
WSCC	16393	4618	5137	4699	3981	3285	2794	3000	2734	3080	2860
NW Pool	481	30	30	32	32	32	32	32	32	32	32
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	87	340	433	382	375	400	389	485	401	398	444
Calif-So. Nev	15825	4248	4674	4285	3574	2853	2373	2483	2301	2650	2384
TOTAL(U.S.)	227568	197608	196101	174248	173565	175844	189589	184571	199505	209049	220188
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	17388	18421	15136	14602	13364	11772	13368	13633	14406	12649	12252
New Brunswick	11167	12810	10023	9408	9924	8000	9333	9419	9008	7540	8126
Nova Scotia	3865	3821	3959	3645	2573	2970	2933	3139	3128	2834	2847
Ontario	2356	1790	1154	1549	867	802	1102	1075	2270	2275	1279
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	17388	18421	15136	14602	13364	11772	13368	13633	14406	12649	12252
Mexico											
WSCC	2405	3144	4183	4779	5037	5209	6133	6062	4875	5894	7029
NERC-Total	247361	219173	215420	193629	191966	192825	209090	204266	218786	227592	239469
ASCC	170	173	178	184	189	195	200	206	212	220	226

[a] Excludes the residual oil requirements of non–utility generators (NUGs).

[b] Includes No.4, No.5, and No.6 fuel oil.

[c] Used in steam, combustion turbine (and diesel), and combined cycle unit

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Residual Oil[b] (Steam) - 1000s Barrels
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	1690	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
ERCOT	1201	354	354	363	354	355	356	358	356	352	351
MAAC	34764	19471	20622	16257	20191	22436	27478	27153	30715	31321	30228
MAIN	1534	384	494	612	1077	1276	1551	1722	2576	2885	3204
Cmnwlth Edison	1330	241	269	382	830	1014	1242	1365	1978	2277	2715
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	204	143	225	230	247	262	309	357	598	608	489
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	64	40	42	37	47	42	54	59	92	58	4
NPCC	123215	123421	116398	99021	94098	90778	96730	93227	100035	100567	110465
New York	63526	66720	65864	49876	42399	36244	39345	32982	37344	34933	41062
NEPOOL	59689	56701	50534	49145	51699	54534	57385	60245	62691	65634	69403
SERC	46752	46937	50481	50663	51256	54857	57310	55477	58893	66056	68225
Florida	40520	41176	43478	43989	44627	49609	51604	47351	52938	57534	59275
Southern	36	88	35	26	46	44	85	180	181	305	390
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	6196	5673	6968	6648	6583	5204	5621	7946	5774	8217	8560
SPP	1628	53	87	107	81	120	184	201	251	225	237
Southeast	1594	1	1	2	2	2	2	2	2	6	6
West Central	13	11	11	11	11	11	11	22	43	44	44
Northern	21	41	75	94	68	107	171	177	206	175	187
WSCC	16387	4582	5101	4660	3942	3246	2755	2961	2695	3041	2818
NW Pool	481	30	30	32	32	32	32	32	32	32	32
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	87	340	433	382	375	400	389	485	401	398	444
Calif-So. Nev	15819	4212	4638	4246	3535	2814	2334	2444	2262	2611	2342
TOTAL(U.S.)	227235	197242	195579	173720	173046	175110	188418	183158	197613	206505	217532
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	17388	18421	15136	14602	13364	11772	13368	13633	14406	12649	12252
New Brunswick	11167	12810	10023	9408	9924	8000	9333	9419	9008	7540	8126
Nova Scotia	3865	3821	3959	3645	2573	2970	2933	3139	3128	2834	2847
Ontario	2356	1790	1154	1549	867	802	1102	1075	2270	2275	1279
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	17388	18421	15136	14602	13364	11772	13368	13633	14406	12649	12252
Mexico											
WSCC	2405	3144	4183	4779	5037	5209	6133	6062	4875	5894	7029
NERC-Total	247028	218807	214898	193101	191447	192091	207919	202853	216894	225048	236813
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] See page 102, footnote a.

[b] See page 102, footnote b.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Residual Oil[b] (Combustion Turbine)[c] – 1000s Barrels
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	14	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	278	329	485	488	479	694	1131	1373	1852	2504	2613
Florida	278	329	485	488	479	694	1131	1373	1852	2504	2613
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	1	1	1	1	1	1	1	1	1	1	1
Southeast	1	1	1	1	1	1	1	1	1	1	1
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	18	18	18	18	18	18	18	18	18	18
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	18	18	18	18	18	18	18	18	18	18
TOTAL(U.S.)	293	348	504	507	498	713	1150	1392	1871	2523	2632
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	293	348	504	507	498	713	1150	1392	1871	2523	2632
ASCC	170	173	178	184	189	195	200	206	212	220	226

[a] See page 102, footnote a.
[b] See page 102, footnote b.
[c] Includes diesel units.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production Residual Oil[b] (Combined Cycle) - 1000s Barrels

(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	14	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	20	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	20	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC	6	18	18	21	21	21	21	21	21	21	24
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	6	18	18	21	21	21	21	21	21	21	24
TOTAL(U.S.)	40	18	18	21	21	21	21	21	21	21	24
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	40	18	18	21	21	21	21	21	21	21	24
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] See page 102, footnote a.

[b] See page 102, footnote b.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Total Crude Oil (Steam) – 1000s Tons
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	0	0	0	0	0	0	0	0	0	0	0
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	490	70	0	0	0	0	0	0	0	0	0
New Brunswick	490	70	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	490	70	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	490	70	0	0	0	0	0	0	0	0	0
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Excludes the crude oil requirements of non-utility generators (NUGs).

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Total Firm Natural Gas[b] - 1000 MCF
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	731441	686478	722391	725690	776976	804390	830695	817842	828936	841625	837163
MAAC	270	0	0	0	0	0	0	0	0	0	0
MAIN	4345	222	314	341	538	700	1021	1074	1493	1796	2736
Cmnwlth Edison	4233	26	54	93	253	362	535	565	1019	1328	2167
East Missouri	0	75	131	131	131	131	131	131	131	131	131
S Cent Illinois	19	31	39	27	64	117	265	288	253	247	348
Wis-Upper Mich	93	90	90	90	90	90	90	90	90	90	90
MAPP	1602	3433	3311	3144	3547	4673	5059	6407	6632	7709	7804
NPCC	271	271	271	7430	7430	7430	7430	7430	7430	7430	7430
New York	271	271	271	7430	7430	7430	7430	7430	7430	7430	7430
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	5877	6355	8913	14945	18254	17272	19935	23417	20548	25353	26679
Florida[c]	5369	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Southern	28	28	28	28	28	28	28	28	28	28	28
TVA	156	79	364	1076	1055	1506	2653	2756	2754	3259	3084
VACAR	324	6248	8521	13841	17171	15738	17254	20633	17766	22066	23567
SPP	493837	476008	460656	468296	448421	453353	458941	473276	492003	527981	541370
Southeast	277952	264509	257066	243450	224566	226518	219084	220269	224493	238870	250048
West Central	211112	205999	197198	219717	217634	219910	233635	243865	258557	281031	282405
Northern	4773	5500	6392	5129	6221	6925	6222	9142	8953	8080	8917
WSCC	609536	429051	447170	492530	519094	566838	568320	578227	628446	660436	683598
NW Pool	15782	44842	46016	47988	46728	47161	45639	46629	47594	47170	47359
Rocky Mt Area	5817	3269	3080	3006	3643	2953	2908	2919	6808	7319	7943
Ariz-N. Mex	77243	39696	44397	38721	44730	50021	55642	54648	66574	66930	77573
Calif-So. Nev	510694	341244	353677	402815	423993	466703	464131	474031	507470	539017	550723
TOTAL(U.S.)	1847179	1601818	1643026	1712376	1774260	1854656	1891401	1907673	1985488	2072330	2106780
Canada											
MAPP	9335	9335	9335	8483	4544	5502	5820	5998	3372	4082	4579
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	45579	33730	20825	20150	29956	41884	48893	53747	57880	62767	65630
TOTAL(Canada)	54914	43065	30160	28633	34500	47386	54713	59745	61252	66849	70209
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	1902093	1644883	1673186	1741009	1808760	1902042	1946114	1967418	2046740	2139179	2176989
ASCC	32661	31927	30306	27370	28564	28249	29090	29853	29907	31536	34095

[a] Excludes the firm natural gas requirements of non-utility generators (NUGs).

[b] Used in steam, combustion turbine (and diesel), and combined cycle units.

[c] Does not distinguish between firm and interruptible natural gas. All natural gas projections are reported as interruptible natural gas. See Appendix C pages 111 through 114 and Table 24 for SERC (Florida) natural gas figures.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Firm Natural Gas (Steam) – 1000 MCF
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	710199	663746	696633	699652	746927	766412	779782	747195	747533	748229	728576
MAAC	109	0	0	0	0	0	0	0	0	0	0
MAIN	4254	146	202	202	202	202	202	202	202	202	202
Cmnwlth Edison	4161	0	0	0	0	0	0	0	0	0	0
East Missouri	0	56	112	112	112	112	112	112	112	112	112
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	93	90	90	90	90	90	90	90	90	90	90
MAPP	1490	1901	1858	1679	1891	2084	2034	2209	2128	2144	2162
NPCC	191	191	191	7350	7350	7350	7350	7350	7350	7350	7350
New York	191	191	191	7350	7350	7350	7350	7350	7350	7350	7350
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	3556	28	28	28	28	28	28	28	28	28	28
Florida[b]	3528	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Southern	28	28	28	28	28	28	28	28	28	28	28
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	464249	447855	431323	438303	418326	423444	428165	442401	461321	490841	509304
Southeast	275142	262884	255399	241664	223132	225209	217699	218273	222261	236052	247371
West Central	184409	179687	169748	191773	189353	191690	204944	215806	230927	247529	253836
Northern	4698	5284	6176	4866	5841	6545	5522	8322	8133	7260	8097
WSCC	542073	396466	410483	461000	483916	527071	512238	520537	561559	590640	598964
NW Pool	15778	44842	46016	47988	46728	47161	45639	46629	47594	47170	47359
Rocky Mt Area	5642	3013	2837	2905	2870	2852	2852	2852	2852	2852	2852
Ariz-N. Mex	41713	18169	20718	18748	22649	25637	27676	26235	33066	31382	34858
Calif-So. Nev	478940	330442	340912	391359	411669	451421	436071	444821	478047	509236	513895
TOTAL(U.S.)	1726121	1510333	1540718	1608214	1658640	1726591	1729799	1719922	1780121	1839434	1846586
Canada											
MAPP	5857	5857	5857	5395	2627	2804	2910	2875	1668	2059	2343
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	38931	29180	17458	16487	25758	35587	40540	44880	48849	52129	55102
TOTAL(Canada)	44788	35037	23315	21882	28385	38391	43450	47755	50517	54188	57445
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	1770909	1545370	1564033	1630096	1687025	1764982	1773249	1767677	1830638	1893622	1904031
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] See page 107, footnote a.

[b] See page 107, footnote c.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Firm Natural Gas (Combustion Turbine)[b] – 1000 MCF
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	2473	1884	2156	2096	4742	8707	9504	7352	8565	9014	11493
MAAC	161	0	0	0	0	0	0	0	0	0	0
MAIN	91	76	112	139	336	398	619	722	1166	1494	2359
Cmnwlth Edison	72	26	54	93	253	362	535	565	1019	1328	2167
East Missouri	0	19	19	19	19	19	19	19	19	19	19
S Cent Illinois	19	31	39	27	64	17	65	138	128	147	173
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	112	1532	1453	1465	1656	2589	3025	4198	4504	5565	5642
NPCC	80	80	80	80	80	80	80	80	80	80	80
New York	80	80	80	80	80	80	80	80	80	80	80
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	1516	286	605	1362	1252	1702	3925	3577	3722	7826	8209
Florida[c]	1036	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	156	79	364	1076	1055	1506	2653	2756	2754	3259	3084
VACAR	324	207	241	286	197	196	1272	821	968	4567	5125
SPP	1302	471	555	501	229	236	530	248	297	267	276
Southeast	165	169	172	174	176	178	181	184	187	190	193
West Central	1062	86	167	64	53	58	49	64	110	77	83
Northern	75	216	216	263	0	0	300	0	0	0	0
WSCC	6984	8742	10595	8895	7059	3364	3552	4945	9856	14593	18597
NW Pool	4	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	175	256	243	101	773	101	56	67	3956	4467	5091
Ariz-N. Mex	3853	634	820	830	1250	1772	2170	3539	4564	8591	12277
Calif-So. Nev	2952	7852	9532	7964	5036	1491	1326	1339	1336	1535	1229
TOTAL(U.S.)	12719	13071	15556	14538	15354	17076	21235	21122	28190	38839	46656
Canada											
MAPP	3478	3478	3478	3088	1917	2698	2910	3123	1704	2023	2236
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	6648	4550	3367	3663	4198	6297	8353	8867	9031	10638	10528
TOTAL(Canada)	10126	8028	6845	6751	6115	8995	11263	11990	10735	12661	12764
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	22845	21099	22401	21289	21469	26071	32498	33112	38925	51500	59420
ASCC	13846	12804	9230	6334	9007	8390	10213	10976	10845	12498	13117

[a] See page 107, footnote a.

[b] Includes diesel units.

[c] See page 107, footnote c.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Firm Natural Gas (Combined Cycle) – 1000 MCF
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	18769	20848	23602	23942	25307	29271	41409	63295	72838	84382	97094
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	100	200	150	125	100	175
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	100	200	150	125	100	175
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	805	6041	8280	13555	16974	15542	15982	19812	16798	17499	18442
Florida[b]	805	--	--	--	--	--	--	--	--	--	--
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	6041	8280	13555	16974	15542	15982	19812	16798	17499	18442
SPP	28286	27682	28778	29492	29866	29673	30246	30627	30385	36873	31790
Southeast	2645	1456	1495	1612	1258	1131	1204	1812	2045	2628	2484
West Central	25641	26226	27283	27880	28228	28162	28642	27995	27520	33425	28486
Northern	0	0	0	0	380	380	400	820	820	820	820
WSCC	60479	23843	26092	22635	28119	36403	52530	52745	57031	55203	66037
NW Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	31677	20893	22859	19143	20831	22612	25796	24874	28944	26957	30438
Calif-So. Nev	28802	2950	3233	3492	7288	13791	26734	27871	28087	28246	35599
TOTAL(U.S.)	108339	78414	86752	89624	100266	110989	140367	166629	177177	194057	213538
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	108339	78414	86752	89624	100266	110989	140367	166629	177177	194057	213538
ASCC	18815	19123	21076	21036	19557	19859	18877	18877	19062	19038	20978

[a] See page 107, footnote a.

[c] See page 107, footnote c.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Total Interruptible Natural Gas[b,c] – 1000 MCF
(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	5053	7124	7149	7097	6623	9771	11282	17973	24168	17004	20953
ERCOT	72898	36457	47313	34511	39083	41087	41068	40493	47749	48091	52872
MAAC	91059	134185	133844	133230	148051	156216	188588	194138	232648	235820	258828
MAIN	3149	2363	3279	3537	4353	4496	5247	7197	9507	9726	10649
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	371	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	1042	438	855	819	877	904	1071	1613	2748	2874	2301
Wis-Upper Mich	1736	1925	2424	2718	3476	3592	4176	5584	6759	6852	8348
MAPP	4183	4605	4881	5423	5568	5157	6109	8712	10280	8665	10943
NPCC	230140	215865	217680	210671	229706	230815	228519	230662	234974	239832	242551
New York	180098	174395	176819	170920	187906	186710	182110	181950	184287	186757	186426
NEPOOL	50042	41470	40861	39751	41800	44105	46409	48712	50687	53075	56125
SERC	201976	195872	190558	189913	192117	201424	216459	217914	230647	243266	256261
Florida	178843	177014	177811	178397	180350	185023	194373	194023	201056	205682	206578
Southern	20175	16716	11598	10366	10499	15228	20682	22631	27887	36022	47325
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	2958	2142	1149	1150	1268	1173	1404	1260	1704	1562	2358
SPP	144205	111451	104083	110064	115422	120190	146992	170641	183069	192282	207396
Southeast	112654	96481	87373	96301	95459	96085	122433	139785	150083	161538	172915
West Central	20609	5220	5480	5042	4213	4002	3543	3818	4298	4203	4406
Northern	10942	9750	11230	8721	15750	20103	21016	27038	28688	26541	30075
WSCC	35521	26401	40812	39353	42234	44488	53663	64868	71467	77124	77575
NW Pool	20311	19470	32315	32505	32815	32819	32804	32976	32824	38173	37872
Rocky Mt Area	2893	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	9642	4444	5926	4250	6747	8940	11364	10508	12561	11295	11421
Calif-So. Nev	2675	2487	2571	2598	2672	2729	9495	21384	26082	27656	28282
TOTAL(U.S.)	788184	734323	749599	733799	783157	813644	897927	952598	1044509	1071810	1138028
Canada											
MAPP	14	14	12	8	10	12	12	16	16	16	12
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	39575	17376	24969	28114	31860	31986	19531	31069	33414	33813	34233
TOTAL(Canada)	39589	17390	24981	28122	31870	31998	19543	31085	33430	33829	34245
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	827773	751713	774580	761921	815027	845642	917470	983683	1077939	1105639	1172273
ASCC	23	23	23	23	23	23	23	23	23	23	23

[a] Excludes the interruptible natural gas requirements of non-utility generators (NUGs).

[b] Interruptible by contractual agreement.

[c] Used in steam, combustion turbine (and diesel), and combined cycle units.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production
Interruptible Natural Gas[b] (Steam) - 1000 MCF
(1990-1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	4117	4550	4237	2898	2983	4038	3287	3686	4551	2613	3468
ERCOT	64220	23266	31876	21438	23469	24650	26382	25637	25861	26379	27350
MAAC	69177	90445	89363	97427	105767	110625	121254	124040	135457	126396	133055
MAIN	2476	1405	1829	2009	2366	2298	1783	2057	2760	2802	2475
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	369	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	957	272	516	483	528	527	609	860	1488	1523	1210
Wis-Upper Mich	1150	1133	1313	1526	1838	1771	1174	1197	1272	1279	1265
MAPP	3577	3015	3327	3892	3930	3394	3803	4208	5704	4544	4653
NPCC	217637	205478	206246	196805	214656	215886	213834	216163	220381	225094	227822
New York	168599	164843	166210	157863	173695	172674	168361	168429	170712	173091	172832
NEPOOL	49038	40635	40036	38942	40961	43212	45473	47734	49669	52003	54990
SERC	171797	154442	149196	147806	111362	111144	111936	113091	114811	115155	116544
Florida	149589	137384	137410	137426	100987	101059	101095	101409	101190	101283	101254
Southern	20022	16674	11402	10064	10026	9708	10473	11311	13208	13395	14847
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	2186	384	384	316	349	377	368	371	413	477	443
SPP	142892	109975	102543	108245	112636	116695	143047	164270	176469	185985	199859
Southeast	112654	96481	87373	96301	95459	96085	122433	139785	150083	161538	172915
West Central	20552	5220	5480	5042	4213	4002	3543	3818	4298	4203	4406
Northern	9686	8274	9690	6902	12964	16608	17071	20667	22088	20244	22538
WSCC	15183	5145	5255	5276	5932	6536	7030	7780	8068	13412	13642
NW Pool	0	0	0	0	472	476	461	471	481	5830	5853
Rocky Mt Area	2893	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	9642	3775	3835	3846	3990	4550	5019	5719	5957	5902	6079
Calif-So. Nev	2648	1370	1420	1430	1470	1510	1550	1590	1630	1680	1710
TOTAL(U.S.)	691076	597721	593872	585796	583101	595266	632356	660932	694062	702380	728868
Canada											
MAPP	14	14	12	8	10	12	12	16	16	16	12
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	39575	17376	24643	27284	30400	30400	17452	28538	30400	30400	30400
TOTAL(Canada)	39589	17390	24655	27292	30410	30412	17464	28554	30416	30416	30412
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	730665	615111	618527	613088	613511	625678	649820	689486	724478	732796	759280
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] See page 111, footnote a.

[b] See page 111, footnote b.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production Interruptible Natural Gas[b] (Combustion Turbine)[c] – 1000 MCF

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	936	2574	2912	4199	3640	5733	7995	14287	19617	14391	17485
ERCOT	3056	10180	11622	10594	13176	12938	11292	10687	12027	10983	10389
MAAC	16914	33683	34711	28129	32286	36227	55132	52073	65836	69544	70701
MAIN	673	958	1450	1528	1987	2198	3464	5140	6747	6924	8173
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	2	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	85	166	339	336	349	377	462	753	1260	1351	1091
Wis-Upper Mich	586	792	1111	1192	1638	1821	3002	4387	5487	5573	7082
MAPP	414	1390	1354	1331	1617	1739	2271	4468	4539	3861	6115
NPCC	11771	9780	10837	13285	14439	14283	14006	13787	13851	13961	13908
New York	11499	9552	10609	13057	14211	14036	13749	13521	13575	13666	13594
NEPOOL	272	228	228	228	228	247	257	266	276	295	314
SERC	3993	4630	4440	3170	3010	4601	9751	10891	15299	20260	26118
Florida	3068	2830	3637	2221	1988	2933	4808	5652	6966	7790	7894
Southern	153	42	38	115	103	872	3907	4350	7042	11385	16309
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	772	1758	765	834	919	796	1036	889	1291	1085	1915
SPP	703	981	1063	1326	2278	2846	3096	5394	5368	5009	5995
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	57	0	0	0	0	0	0	0	0	0	0
Northern	646	981	1063	1326	2278	2846	3096	5394	5368	5009	5995
WSCC	9041	3560	10138	10104	10081	10332	10332	10369	10484	10347	10023
NW Pool	9014	3262	9503	9580	9558	9558	9558	9580	9558	9558	9234
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	178	515	404	403	654	654	654	791	654	654
Calif-So. Nev	27	120	120	120	120	120	120	135	135	135	135
TOTAL(U.S.)	47501	67736	78527	73666	82514	90897	117339	127096	153768	155280	168907
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	326	830	1460	1586	2079	2531	3014	3413	3833
TOTAL(Canada)	0	0	326	830	1460	1586	2079	2531	3014	3413	3833
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	47501	67736	78853	74496	83974	92483	119418	129627	156782	158693	172740
ASCC	23	23	23	23	23	23	23	23	23	23	23

[a] See page 111, footnote a.

[b] See page 111, footnote b.

[c] Includes diesel units.

Regional Fossil Fuel Requirements[a] for Electrical Energy Production Interruptible Natural Gas[b] (Combined Cycle) – 1000 MCF

(1990–1999 Forecast)

	ACTUAL	PROJECTED									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	5622	3011	3815	2479	2438	3499	3394	4169	9861	10729	15133
MAAC	4968	10057	9770	7674	9998	9364	12202	18025	31355	39880	55072
MAIN	0	0	0	0	0	0	0	0	0	0	1
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	1
MAPP	192	200	200	200	21	24	35	36	37	260	175
NPCC	732	607	597	581	611	646	679	712	742	777	821
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	732	607	597	581	611	646	679	712	742	777	821
SERC	26186	36800	36922	38937	77745	85679	94772	93932	100537	107851	113599
Florida	26186	36800	36764	38750	77375	81031	88470	86962	92900	96609	97430
Southern	0	0	158	187	370	4648	6302	6970	7637	11242	16169
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	610	495	477	493	508	649	849	977	1232	1288	1542
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	610	495	477	493	508	649	849	977	1232	1288	1542
WSCC	11297	17696	25419	23973	26221	27620	36301	46719	52915	53365	53910
NW Pool	11297	16208	22812	22925	22785	22785	22785	22925	22785	22785	22785
Rocky Mt Area	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	491	1576	0	2354	3736	5691	4135	5813	4739	4688
Calif-So. Nev	0	997	1031	1048	1082	1099	7825	19659	24317	25841	26437
TOTAL(U.S.)	49607	68866	77200	74337	117542	127481	148232	164570	196679	214150	240253
Canada											
MAPP	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	49607	68866	77200	74337	117542	127481	148232	164570	196679	214150	240253
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] See page 111, footnote a.

[b] See page 111, footnote b.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/01	ECAR		MI	DECO	One facility	7	ST	UNK	P	ZZ	
90/01	ECAR		UN	WPSC	Unidentified	5	UN	UNK	P	ZZ	
90/01	MAAC		NJ	GPUS	Gloucester Co. RR - NUG	11[b]	ST	REF	V	ZZ	
90/01	MAAC		NJ	GPUS	L&D Landfill - NUG	4[b]	IC	GAS	V	ZZ	
90/01	MAAC		PA	GPUS	York County RR - NUG	30[b]	ST	REF	V	ZZ	
90/01	MAAC		PA	PECO	Limerick 2	1055	NB	UR	V	U	
90/01	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	0.1	UN	GAS	V	ZZ	
90/01	WSCC	CNV	CA	NCPA	HYDROELEC. PROJ NO. ONE	200	HY	WAT	V	U	J
90/01	WSCC	CNV	CA	PG&E	QF COGENERATION 90	391	CG	UNK	P	CG	
90/01	WSCC	CNV	CA	PG&E	QF GEOTHERMAL 90	20	GE	GST	P	ZZ	
90/01	WSCC	CNV	CA	PG&E	QF HYDRO 90	11	HY	WAT	P	ZZ	
90/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 90	145	ZZ	UNK	P	ZZ	
90/01	WSCC	CNV	CA	PG&E	QF WIND 90	9	WM	WND	P	ZZ	
90/01	WSCC	CNV	CA	SDGE	QF BIOGAS (1)	1	IC	ZZ	P	ZZ	
90/01	WSCC	CNV	CA	SDGE	QF COGENERATION	29	CG	NG	P	CG	
90/01	WSCC	CNV	CA	SDGE	QF COGENERATION	6	CG	ZZ	P	CG	
90/01	WSCC	NWP	ID	EWEB	SMITH CREEK	10	HY	WAT	P	ZZ	
90/01	WSCC	NWP	WA	PSPL	TWIN FALLS	20	HY	WAT	P	ZZ	
90/02	ECAR		MI	CP	MCV Contract	806	CA	NG	P	ZZ	
90/02	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	77	UN	UNK	V	ZZ	
90/02	NPCC	NE	ME	CMP	Lewiston Steam & Power Ph II EX	3.4	ST	BIO	V	ZZ	
90/02	NPCC	NE	RI	NEES	Northeast Landfill (Johnston)	5	IC	GAS	U	ZZ	
90/02	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	53.7	UN	GAS	V	ZZ	
90/02	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	23[c]	ZZ	UNK	V	ZZ	
90/02	SERC	VAC	UN	VIEP	WYTHE PARK POWER 2	2	IC	OIL	P	ZZ	
90/03	ERCOT		TX	TUEC	DECORDOVA CT # 1	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	DECORDOVA CT # 2	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	DECORDOVA CT # 3	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	DECORDOVA CT # 4	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	PERMIAN BASIN CT #4	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	PERMIAN BASIN CT #5	65	GT	NG	V	U	
90/03	MAAC		NJ	GPUS	Newark Boxboard - NUG	52[b]	GT	NG	V	ZZ	
90/03	MAAC		PA	PLCO	Amity Landfill - NUG	2	IC	GAS	V	ZZ	
90/03	MAAC		PA	PLCO	Foster Wheeler - NUG	40	FB	CUL	V	ZZ	
90/03	NPCC	NE	CT	NU	AES Thames	79	ST	COL	V	ZZ	
90/03	NPCC	NE	CT	NU	Dexter Corp. CH	38	CC	MUL	V	ZZ	
90/03	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	10	UN	REF	V	ZZ	
90/03	NPCC	ONT	ON	ONHY	DARLINGTON 2	881	CD	UR	V	U	
90/03	NPCC	QUE	QB	HYQB	MANIC 5 P.A. 3	264	HY	WAT	V	U	
90/03	NPCC	QUE	QB	HYQB	MANIC 5 P.A. 4	264	HY	WAT	V	U	
90/03	SERC	FL	FL	FLPL	TROPICANA PROD. INC. 1-2	0	CG	NG	P	CG	
90/03	SPP	N	KS	KACP	GARDNER	20	ST	MUL	V	U	
90/03	WSCC	NWP	WA	TCL	STEAM PLANT NO. 2	38	CG	REF	V	U	
90/04	ERCOT		TX	TUEC	COMANCHE PEAK # 1	1150	NP	UR	V	U	
90/04	NPCC	NE	VT	VTGP	HIGHGATE FALLS	3.1	HY	WAT	V	U	
90/04	NPCC	NE	VT	VTGP	Springfield (Fellows/Lovejoy)	0.4	HY	WAT	V	ZZ	
90/04	NPCC	NY	NY	ROGE	NON-UTILITY GENERATORS	0.9	HY	WAT	V	ZZ	
90/04	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	1[c]	ZZ	UNK	V	ZZ	
90/04	SERC	FL	FL	FLPC	LFC #47 1	9	UN	WD	P	ZZ	
90/04	WSCC	AZN	NM	LAC	ABIQUIU 1	7	HY	WAT	V	U	

[a] See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] Facilities qualifying under PURPA which may be waste burning (trash, waste coal), small hydro, third party financed or self-generation, cogeneration (in excess of internal load served), wind, solar, etc.

[c] Includes industrial non-utility generation, power from municipal waste, and/or small hydro developments.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/04	WSCC	AZN	NM	LAC	ABIQUIU 2	7	HY	WAT	V	U	
90/04	WSCC	NWP	ID	IPC	HAZELTON A SMALL HYDRO	8	HY	WAT	P	ZZ	
90/05	MAAC		NJ	AECO	Cumberland 1	76	GT	NG	V	U	
90/05	MAAC		PA	GPUS	Frontier Energy - NUG	15.5[b]	GT	NG	U	ZZ	
90/05	NPCC	NE	CT	NU	Quinebaug Five Mile Hydro BHB	2.16	HY	WAT	V	ZZ	
90/05	NPCC	NE	MA	CES	Pepperell	34.6	CC	GAS	T	ZZ	
90/05	NPCC	NE	ME	CMP	Boise Cascade (Rumford Cogen)	29	ST	BIO	V	CG	
90/05	NPCC	NE	RI	NEES	Northeast Landfill (Johnston)	7	IC	GAS	U	ZZ	
90/05	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	10	ST	GAS	T	ZZ	
90/05	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	2[c]	ZZ	UNK	V	ZZ	
90/05	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	21	UN	UNK	P	ZZ	
90/05	SERC	VAC	UN	VIEP	CORE-CHESTERFIELD	3	GT	GAS	P	ZZ	
90/05	SERC	VAC	UN	VIEP	HOPEWELL COGEN	306	ST	UNK	P	CG	
90/05	SPP	N	MO	STJO	LAKE ROAD 7	21	JE	FO2	L	U	
90/05	SPP	SE	TX	LUPL	TECH 1	20	GT	NG	U	U	
90/05	SPP	WC	NM	SWPS	MADDOX 3 GT	10	GT	GAS	V	U	
90/05	SPP	WC	OK	OKGE	COGENERATOR - CONOCO	52	ST	NG	V	CG	
90/05	WSCC	NWP	UT	UAMP	PINEVIEW	2	HY	WAT	U	U	
90/05	WSCC	NWP	WA	GCPD	P.E.C. HEADWORKS	7	HY	WAT	V	ZZ	
90/06	ECAR		IN	IP&L	One facility	4	ST	REF	P	ZZ	
90/06	ERCOT		TX	TNMP	TNP ONE UNIT 1	148	ST	LIG	V	U	
90/06	ERCOT		TX	TUEC	TEX-LA (SPA)	-50[d]	UN	UNK	P	U	
90/06	MAAC		MD	PPCO	SMECO CT	84	GT	NG	L	U	
90/06	MAAC		NJ	GPUS	Hamm's Landfill - NUG	1[b]	IC	GAS	U	ZZ	
90/06	MAIN	WUM	WI	WPS	LANDFILL GAS	3	ST	GAS	P	U	
90/06	NPCC	NE	NH	PSNH	SEABROOK 1	1150[e]	NP	UR	V	U	
90/06	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	3.3	UN	REF	V	ZZ	
90/06	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	2[c]	ZZ	UNK	V	ZZ	
90/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 01 (UNK)	0	CG	NG	P	CG	
90/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 03 (UNK)	0	CG	NG	P	CG	
90/06	SERC	VAC	UN	VIEP	OGDEN MARTIN SYSTEMS	60	ST	REF	P	ZZ	
90/06	SERC	VAC	VA	VIEP	Chesterfield 7	137	CT	NG	U	U	
90/06	SERC	VAC	VA	VIEP	Chesterfield 7	62	CW	WH	U	U	
90/06	SERC	VAC	VA	VIEP	Darbytown 1	79	GT	FO2	U	U	
90/06	SERC	VAC	VA	VIEP	Darbytown 2	79	GT	FO2	U	U	
90/06	SERC	VAC	VA	VIEP	Darbytown 3	79	GT	FO2	U	U	
90/06	SERC	VAC	VA	VIEP	Darbytown 4	79	GT	FO2	U	U	
90/06	WSCC	AZN	AZ	TEP	SPRINGERVILLE 2	360	ST	SUB	V	U	
90/07	ECAR		PA	APS	Milesburg	43	ST	CUL	P	ZZ	
90/07	ECAR		UN	CP	One facility	50	UN	COL	P	ZZ	
90/07	MAAC		PA	PLCO	Lycoming Landfill - NUG	1	IC	GAS	U	ZZ	
90/07	NPCC	NE	CT	NU	Wallingford Refuse (CRRA)	2.3	ST	REF	V	ZZ	
90/07	NPCC	NE	MA	NEES	Altresco/G.E.	161	CC	GAS	U	ZZ	
90/07	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	2.2	HY	WAT	V	ZZ	
90/07	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	50.4	UN	GAS	V	ZZ	
90/07	NPCC	NY	NY	POAS	PASNY NEW HYDRO	12	HY	WAT	V	U	
90/07	SERC	VAC	UN	VIEP	COGENTRIX - ROCKY MT.	105	ST	COL	P	CG	
90/07	SERC	VAC	UN	VIEP	DALE FACILITY	3	GT	GAS	P	ZZ	
90/07	SERC	VAC	UN	VIEP	HUDDLESTON	2	ST	WD	P	ZZ	
90/07	SERC	VAC	UN	VIEP	STS HYDRO	3	HY	WAT	P	ZZ	

[a] See page 115, footnote a

[b] See page 115, footnote b.

[c] See page 115, footnote c.

[d] Contract for firm purchase power expires.

[e] PSNH is unable to predict when the Seabrook plant will be permitted to commence operation. However, for planning and reporting purposes, NEPLAN is assuming commercial operation by Jan. 1, 1990.

Generating Unit Additions (Utility and Non-Utility)[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/07	WSCC	CNV	CA	SCE	BATTERY STORAGE	10	ZZ	UNK	V	ZZ	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY BIOMASS	94	IC	UNK	P	ZZ	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY COGEN.	138	CG	UNK	P	CG	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY COGEN.	158	CG	NG	P	CG	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY GEOTHERMAL	51	GE	GST	P	ZZ	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY SOLAR	71	SO	SUN	P	ZZ	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY WIND	26	WM	WND	P	ZZ	
90/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	-10	ZZ	UNK	P	ZZ	
90/08	MAAC		NJ	GPUS	Dupont - NUG	92[b]	GT	NG	V	ZZ	
90/08	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	4.8	UN	REF	V	ZZ	
90/08	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	121[c]	ZZ	UNK	V	ZZ	
90/08	WSCC		MX	CFE	ROSARITO II #1	150	ST	FO6	V	U	
90/09	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-300[d]	UN	UNK	P	ZZ	
90/09	MAAC		PA	PLCO	Archbald Power - NUG	21	FB	CUL	V	ZZ	
90/09	NPCC	NE	ME	CMP	MONTY	25	HY	WAT	U	U	
90/09	SERC	FL	FL	FLPC	LAKE COUNTY RESOURCE REC. 1	10	UN	REF	P	ZZ	
90/09	SERC	VAC	UN	VIEP	RICHMONT POWER	210	CA	UNK	P	ZZ	
90/09	WSCC	NWP	WA	PSPL	KOMA KULSHAN	12	HY	WAT	P	ZZ	
90/09	WSCC	RMP	CO	PSC	COLO. POWER PROJECT #1	50	CG	NG	V	CG	
90/10	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	15	HY	WAT	U	ZZ	
90/10	NPCC	NY	NY	POAS	NON-UTILITY GENERATORS	2.5	UN	GAS	P	ZZ	
90/10	WSCC		AB	TAUC	SHEERNESS 2	383	ST	SUB	V	U	J
90/10	WSCC	NWP	NV	SPP	STILLWATER GEOTHERMAL 2	13	GE	GST	P	ZZ	
90/11	NPCC	NE	CT	NU	O'Brien/Hartford	53.5	CC	MUL	U	ZZ	
90/11	NPCC	NE	MA	PMLP	WATERS RIVER 2	28.5	JE	NG	L	U	
90/11	NPCC	NE	RI	NEES	E.M.I. (Pawtucket Power)	61	CC	GAS	U	ZZ	
90/11	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	3.2	UN	REF	U	ZZ	
90/11	NPCC	NY	PA	NEYE	NON-UTILITY GENERATORS	46	HY	WAT	U	ZZ	
90/11	SERC	VAC	UN	VIEP	PANDA	150	IC	NG	P	ZZ	
90/11	WSCC	RMP	CO	PSC	LAKEWOOD HYDRO	2	HY	WAT	T	ZZ	
90/11	WSCC	RMP	CO	PSC	TWIN TUNNELS HYDRO	1	HY	WAT	T	ZZ	
90/12	ECAR		UN	CG&E	Unidentified Facility	8	UN	UNK	P	ZZ	
90/12	ECAR		WV	APS	Sutton	2	HY	WAT	P	ZZ	
90/12	MAAC		NJ	PSCO	Essex County RRF - NUG	67	UN	REF	P	ZZ	
90/12	MAAC		PA	GPUS	Lancaster Co. RR - NUG	34[b]	ST	REF	U	ZZ	
90/12	NPCC	NE	MA	OSP	OCEAN STATE POWER 1	225	CC	NG	U	U	
90/12	NPCC	NE	VT	VTGP	Dodge Falls - Hydro Co.	2.5	HY	WAT	U	ZZ	
90/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	16.5	HY	WAT	T	ZZ	
90/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	5	UN	REF	T	ZZ	
90/12	NPCC	ONT	ON	ONHY	DARLINGTON 1	881	CD	UR	V	U	
90/12	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	49	UN	UNK	P	ZZ	
90/12	SERC	FL	FL	FLPL	COMM. COGENERATOR 02 (1)	0	CG	NG	P	CG	
90/12	SERC	SOU	GA	SEPA	RUSSELL HYDRO #5	75	PS	WAT	U	U	
90/12	SERC	VAC	NC	CAPO	CRAVEN COUNTY WOOD ENERGY	45	ST	WD	U	ZZ	
90/12	SERC	VAC	UN	VIEP	ENERGY ENGINEERING	14	ST	WD	P	ZZ	
SUBTOTAL						12639					
91/01	ECAR		KY	LG&E	Trimble County 1	495[e]	ST	COL	V	U	
91/01	ECAR		MI	CP	One facility	29	UN	COL	P	ZZ	
91/01	ECAR		MI	DECO	One facility	5	ST	REF	P	ZZ	

[a] See page 115, footnote a.

[b] See page 115, footnote b.

[c] See page 115, footnote c.

[d] Contract for firm purchase power expires.

[e] 371 MW to be retained by LG&E, the remainder will be sold.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
91/01	ECAR		UN	PSI	Unidentified	6	UN	UNK	P	ZZ	
91/01	MAAC		UN	PSCO	Small QF's - NUG	20	UN	UNK	P	ZZ	
91/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	1	HY	WAT	U	ZZ	
91/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	17.8	UN	WD	T	ZZ	
91/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	59[b]	ZZ	UNK	V	ZZ	
91/01	SERC	FL	FL	FLPC	PASCO WASTE RECOVERY 1	23	UN	REF	P	ZZ	
91/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 08 (UNK)	0	CG	NG	P	CG	
91/01	SERC	FL	FL	FLPL	IND. COGENERATOR 02 (UNK)	0	CG	COL	P	CG	
91/01	SERC	FL	FL	HSTM	G. W. Ivey 22	24	IC	NG	P	U	
91/01	WSCC	CNV	CA	LDWP	NON-UTILITY COGEN.	10	CG	UNK	P	CG	
91/01	WSCC	CNV	CA	PG&E	PVUSA 1	1	SO	SUN	U	U	
91/01	WSCC	CNV	CA	PG&E	QF COGENERATION 91	167	CG	UNK	P	CG	
91/01	WSCC	CNV	CA	PG&E	QF GEOTHERMAL 91	3	GE	GST	P	ZZ	
91/01	WSCC	CNV	CA	PG&E	QF HYDRO 91	1	HY	WAT	P	ZZ	
91/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 91	30	ZZ	UNK	P	ZZ	
91/01	WSCC	CNV	CA	PG&E	QF WIND 91	9	WM	WND	P	ZZ	
91/01	WSCC	NWP	ID	PEOG	ENERGENICS	2	HY	WAT	P	ZZ	
91/01	WSCC	NWP	ID	PEOG	ENVIRONMENTAL ENERGY CO.	8	HY	WAT	P	ZZ	
91/01	WSCC	NWP	MT	MPC	MONTANA ONE	35	CG	ZZ	P	CG	
91/01	WSCC	NWP	UT	PEOG	COVE FORT 1	7	GE	GST	P	U	
91/01	WSCC	NWP	UT	PEOG	KAISER COGEN	45	CG	BIT	P	CG	
91/01	WSCC	NWP	WA	SHPD	SUMMIT COGEN	10	CG	WD	L	CG	
91/01	WSCC	RMP	CO	PSC	GEORGETOWN HYDRO DAM	0	HY	WAT	T	ZZ	
91/01	WSCC	RMP	CO	PSC	HIGHLAND CANAL HYDRO	1	HY	WAT	T	ZZ	
91/02	MAPP		MB	MHEB	LIMESTONE 3	120	HY	WAT	U	U	
91/02	SERC	FL	FL	KEYW	Stock Island 1	9.8	IC	FO2	U	U	
91/02	SERC	FL	FL	KEYW	Stock Island 2	9.8	IC	FO2	U	U	
91/03	MAAC		PA	GPUS	Cambria Cogen - NUG	80[c]	FB	CUL	U	CG	
91/03	MAAC		PA	GPUS	Ebensburg Power - NUG	50[c]	FB	CUL	U	ZZ	
91/03	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	55	UN	GAS	T	ZZ	
91/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	11	UN	REF	U	ZZ	
91/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	63.8	UN	GAS	U	ZZ	
91/03	SERC	VAC	GA	SEPA	RUSSELL HYDRO #6	75	PS	WAT	U	U	
91/03	SERC	VAC	NC	CAPO	NEW HANOVER COUNTY	3	ST	REF	U	ZZ	
91/03	WSCC	NWP	ID	WWPC	CANYON CREEK (2)	0	HY	WAT	T	ZZ	
91/03	WSCC	NWP	OR	IPC	TUNNEL NO. 1	6	HY	WAT	P	ZZ	
91/03	WSCC	NWP	WA	PSPL	SPOKANE MSW	23	CG	REF	P	CG	
91/03	WSCC	RMP	WY	USGP	SHOSHONE	21	HY	WAT	V	U	
91/04	ECAR		IN	SIGE	A.B. Brown GT #1	80	GT	NG	U	U	
91/04	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-400[d]	UN	UNK	P	ZZ	
91/04	MAAC		NJ	AECO	Mobil - NUG 1	41	CT	NG	U	ZZ	
91/04	MAIN	WUM	WI	MPU	MANITOWOC 5	25	ST	BIT	P	U	
91/04	MAPP		MB	MHEB	LIMESTONE 4	120	HY	WAT	U	U	
91/04	NPCC	NE	CT	NU	Waste Mgmt (New Milfd Ld. Fl.)	3	GT	GAS	U	ZZ	
91/04	NPCC	NY	NY	ORRU	NON-UTILITY GENERATORS	16	UN	GAS	P	ZZ	
91/05	ECAR		OH	HAMI	Hydro	5	HY	WAT	P	U	
91/05	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	300	UN	UNK	P	ZZ	
91/05	MAAC		DE	DPLC	Dover	35	GT	FO2	U	U	
91/05	MAAC		DE	DPLC	Hay Road 3	105	CT	NG	L	U	
91/05	MAAC		NJ	AECO	Unassigned CT 1	78	GT	NG	L	U	

[a] See page 115, footnote a.

[b] See page 115, footnote c.

[c] See page 115, footnote b.

[d] Contract for firm purchase power expires.

Generating Unit Additions (Utility and Non–Utility)[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
91/05	MAAC		PA	AECO	DRMI - NUG 1	75	ZZ	REF	U	ZZ	
91/05	MAIN	WUM	WI	MPU	BOILER ADDITION	13	ST	BIT	U	U	
91/05	MAPP		UN	NWPS	FUTURE CT 1	19.1	GT	FO2	L	U	
91/05	NPCC	NE	VT	UNITIL	Arrowhead Cogen.	27	ST	MUL	T	CG	
91/05	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	35	UN	GAS	L	ZZ	
91/05	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	5	ST	WD	T	ZZ	
91/05	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	10	UN	GAS	P	ZZ	
91/05	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	13	UN	WD	T	ZZ	
91/05	SERC	SOU	AL	ALAP	MILLER 4	667	ST	BIT	U	U	
91/05	SERC	VAC	SC	SOCG	HAGOOD GT 1	93	GT	NG	T	U	
91/05	SERC	VAC	UN	VIEP	N.B. PARTNERS	73	ST	COL	P	ZZ	
91/05	SERC	VAC	UN	VIEP	TURBO POWER 1	100	CC	NG	P	ZZ	
91/05	SERC	VAC	UN	VIEP	TURBO POWER 2	100	CC	NG	P	ZZ	
91/05	SPP	N	MO	MIPU	GREENWOOD 1	3	GT	FO2	L	U	
91/05	SPP	N	MO	MIPU	GREENWOOD 2	3	GT	FO2	L	U	
91/05	SPP	N	MO	MIPU	GREENWOOD 3	3	GT	FO2	L	U	
91/05	SPP	N	MO	MIPU	GREENWOOD 4	3	GT	FO2	L	U	
91/05	SPP	WC	OK	OKGE	COGENERATOR - AES[b]	300	ST	BIT	V	CG	
91/06	ECAR		OH	CG&E	W.H. Zimmer 1	1300[c]	ST	COL	V	U	J
91/06	ERCOT		TX	TNMP	TNP ONE UNIT 2	148	ST	LIG	U	U	
91/06	MAAC		MD	BCCO	Brandon Shores 2	640	ST	BIT	V	U	
91/06	MAAC		MD	PPCO	Chalk Point 5	105	GT	NG	L	U	
91/06	MAAC		MD	PPCO	Chalk Point 6	105	GT	NG	L	U	
91/06	MAAC		MD	PPCO	Chalk Point Ct 3	86	GT	NG	L	U	
91/06	MAAC		MD	PPCO	Chalk Point Ct 4	86	GT	NG	L	U	
91/06	MAAC		NJ	GPUS	Camden Co. RR - NUG	21	ST	REF	U	ZZ	
91/06	MAAC		NJ	GPUS	Continental, Sayre - NUG	250[d]	CW	NG	U	ZZ	
91/06	MAAC		NJ	PSCO	Eagle Point - NUG	160	CW	NG	T	ZZ	
91/06	MAPP		IA	IPW	MASON CITY GT 1	30	GT	FO2	U	U	
91/06	MAPP		IA	IPW	MASON CITY GT 2	30	GT	FO2	U	U	
91/06	NPCC	NE	CT	NU	Exeter Energy (Oxford)	26	ST	ZZ	U	ZZ	
91/06	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	104	UN	GAS	T	ZZ	
91/06	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	3.5	HY	WAT	P	ZZ	
91/06	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	7.5	UN	WD	T	ZZ	
91/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 04 (UNK)	0	CG	NG	P	CG	
91/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 05 (UNK)	0	CG	NG	P	CG	
91/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 06 (UNK)	0	CG	NG	P	CG	
91/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 07 (UNK)	0	CG	NG	P	CG	
91/06	SERC	SOU	AL	ALEC	CAES 1[e]	110	ZZ	NG	U	U	
91/06	SERC	SOU	GA	SEPA	RUSSELL HYDRO #7	75	PS	WAT	U	U	
91/06	SERC	VAC	UN	VIEP	COGENTRIX - RICHMOND	190	ST	COL	P	CG	
91/06	SPP	SE	TX	LUPL	WASTE RECOVERY 1	10	ST	REF	T	U	
91/06	WSCC	RMP	CO	PSC	RALSTON HYDRO FACILITY	0	HY	WAT	T	ZZ	
91/07	ECAR		WV	APS	Randolph	3	HY	WAT	P	ZZ	
91/07	MAPP		MB	MHEB	LIMESTONE 5	120	HY	WAT	U	U	
91/07	NPCC	NE	CT	NU	SE CT. Regional CRRA(Proctor)	13.85	ST	REF	U	ZZ	
91/07	NPCC	NE	MA	CES	Northeast Energy Asso 1 & 2	46	CC	GAS	T	ZZ	
91/07	WSCC		MX	CFE	ROSARITO II #2	150	ST	FO6	V	U	
91/07	WSCC	CNV	CA	GLEN	SCHOLL CANYON 2	0	IC	REF	U	U	
91/07	WSCC	CNV	CA	SCE	COOLWATER IGCC	25	CW	WH	V	U	

---

[a] See page 115, footnote a.

[b] Applied Energy Services.

[c] The owners of this plant, which has been under construction as a nuclear unit, announced on January 21, 1984 that the plant design will be converted from nuclear to coal-fired.

[d] See page 115, footnote b.

[e] Compressed air energy storage.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
91/07	WSCC	CNV	CA	SCE	COOLWATER IGCC	75	CT	NG	V	U	
91/07	WSCC	CNV	CA	SCE	NON-UTILITY BIOMASS	11	IC	UNK	P	ZZ	
91/07	WSCC	CNV	CA	SCE	NON-UTILITY COGEN.	31	CG	UNK	P	CG	
91/07	WSCC	CNV	CA	SCE	NON-UTILITY GEOTHERMAL	21	GE	GST	P	ZZ	
91/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
91/07	WSCC	CNV	CA	SCE	VERNON CT	40	GT	NG	U	U	
91/07	WSCC	NWP	UT	UAMP	EAST CANYON 1 & 2	2	HY	WAT	L	U	
91/07	WSCC	NWP	UT	UAMP	LOST CREEK	1	HY	WAT	T	U	
91/07	WSCC	RMP	CO	PSC	PEACH QUEEN POWER STAT	3	HY	WAT	T	ZZ	
91/08	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	19	UN	WD	T	ZZ	
91/08	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79.9	UN	GAS	T	ZZ	
91/09	ASCC		AK	AEA	BRADLEY LAKE	108	HY	WAT	V	U	
91/09	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	79.8	UN	GAS	P	ZZ	
91/09	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	124.9	UN	COL	P	ZZ	
91/09	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	280	UN	GAS	P	ZZ	
91/09	SERC	VAC	GA	SEPA	RUSSELL HYDRO #8	75	PS	WAT	U	U	
91/09	SERC	VAC	UN	VIEP	ULTRASYSTEMS-SOUTHHAMPTON	57	ST	COL	P	ZZ	
91/10	ECAR		PA	APS	Burgettstown	80	ST	CUL	P	ZZ	
91/10	ECAR		UN	APS	PURPA Contingency	-25	UN	UNK	P	ZZ	
91/10	MAAC		NJ	PSCO	Union County RRF - NUG	40	ST	REF	P	ZZ	
91/10	MAPP		MB	MHEB	LIMESTONE 6	120	HY	WAT	U	U	
91/10	NPCC	NS	NS	NSPC	TRENTON 6	150	ST	BIT	U	U	
91/10	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	37.5	UN	GAS	L	ZZ	
91/10	NPCC	QUE	QB	HYQB	LG 2A P.A. 1	316	HY	WAT	V	U	
91/10	SERC	FL	FL	FLPC	PINELLAS WASTE REC. NORTH 1	40	UN	REF	P	ZZ	
91/10	SERC	TVA	TN	TEVA	WATTS BAR NO. 1	1170	NP	UR	V	U	
91/10	SERC	VAC	UN	VIEP	MECKLINBURG COGEN	120	ST	COL	P	CG	
91/10	WSCC		AB	EDMP	GENESEE 1	406	ST	SUB	V	U	
91/10	WSCC		AB	TAUC	NON-UTILITY GENERATION	125	CG	UNK	P	CG	
91/10	WSCC		BC	WKPL	COGEN	5	CG	WD	P	CG	
91/10	WSCC		BC	WKPL	GAS TURBINES 1-2	116	GT	NG	L	U	
91/10	WSCC	AZN	AZ	USLC	HEADGATE (3)	22	HY	WAT	U	U	
91/10	WSCC	NWP	ID	PEOG	MARSH VALLEY	2	HY	WAT	P	ZZ	
91/10	WSCC	RMP	CO	PSC	PUEBLO CHEMICAL	65	CG	NG	T	CG	
91/10	WSCC	RMP	CO	USUC	MCPHEE POWER PLANT	1	HY	WAT	V	U	
91/11	MAAC		PA	GPUS	Glendon Energy - NUG	12[b]	ST	REF	L	ZZ	
91/11	NPCC	NB	NB	NBPO	MILL BANK #1	84	GT	FO2	L	U	
91/11	NPCC	NB	NB	NBPO	MILL BANK #2	84	GT	FO2	L	U	
91/11	NPCC	NB	NB	NBPO	MILL BANK #3	84	GT	FO2	L	U	
91/11	NPCC	NB	NB	NBPO	MILL BANK #4	84	GT	FO2	L	U	
91/11	NPCC	NE	MA	OSP	OCEAN STATE POWER 2	225	CC	NG	U	U	
91/11	NPCC	NE	VT	VTGP	East Georgia	29	ST	GAS	V	ZZ	
91/11	NPCC	NE	VT	VTGP	FLORENCE GT	9	GT	FO2	L	U	
91/11	NPCC	NE	VT	VTGP	NEWPORT 1	0.2	HY	WAT	P	U	
91/11	NPCC	NE	VT	VTGP	Swanton Hydro	0.69	HY	WAT	T	ZZ	
91/11	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	41	UN	GAS	T	ZZ	
91/11	NPCC	QUE	QB	HYQB	LG 2A P.A. 2	316	HY	WAT	V	U	
91/11	SERC	FL	FL	FLPL	IND. COGENERATOR 01 (UNK)	6	CG	NG	P	CG	
91/12	MAAC		NJ	PSCO	Newark Bay - NUG	92	CW	NG	L	ZZ	
91/12	MAAC		NJ	PSCO	Pennsauken RRF - NUG	7	ST	REF	L	ZZ	

[a] See page 115, footnote a.

[b] See page 115, footnote b.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
91/12	MAAC		UN	GPUS	Non-Utility Generation	25[b]	UN	UNK	L	ZZ	
91/12	MAPP		MB	MHEB	LIMESTONE 7	120	HY	WAT	U	U	
91/12	NPCC	NE	MA	CES	TONDU Energy Sys.(Lee Mills)	47	CC	GAS	T	ZZ	
91/12	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	159.6	UN	GAS	P	ZZ	
91/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	52	UN	COL	U	ZZ	
91/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79.3	UN	GAS	L	ZZ	
91/12	NPCC	ONT	ON	ONHY	DARLINGTON 3	881	CD	UR	V	U	
91/12	NPCC	QUE	QB	HYQB	HART JAUNE 1-2-3	48	HY	WAT	U	U	
91/12	NPCC	QUE	QB	HYQB	LG 2A P.A. 3	316	HY	WAT	V	U	
91/12	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	146	UN	UNK	P	ZZ	
91/12	SERC	VAC	UN	VIEP	DOSWELL L.P.	275	CC	NG	P	ZZ	
91/12	SERC	VAC	UN	VIEP	DOSWELL L.P.	275	CC	NG	P	ZZ	
91/12	SERC	VAC	UN	VIEP	ULTRASYSTEMS-ALTAVISTA	57	ST	COL	P	ZZ	
91/12	SERC	VAC	UN	VIEP	WYTHE PARK POWER 3	3	IC	OIL	P	ZZ	
91/12	SERC	VAC	UN	VIEP	WYTHE PARK POWER 4	3	IC	OIL	P	ZZ	
SUBTOTAL						14696					
92/01	ECAR		MI	CP	MCV Contract	109	CA	NG	P	ZZ	
92/01	ECAR		MI	CP	Three facilities	78	UN	WOD	P	ZZ	
92/01	ECAR		MI	DECO	One facility	5	ST	REF	P	ZZ	
92/01	ECAR		PA	APS	Pt. Marion	2	HY	WAT	P	ZZ	
92/01	ECAR		WV	APS	Grant Town	80	ST	CUL	P	ZZ	
92/01	MAAC		UN	AECO	Small Power Producer 1	15	GT	NG	P	ZZ	
92/01	MAAC		UN	PSCO	Small QF's - NUG	20	UN	UNK	P	ZZ	
92/01	NPCC	NE	CT	NU	Bio-gen Torrington Ptnrshp	13	ST	BIO	T	ZZ	
92/01	NPCC	NE	CT	NU	Flagg/Perkin Elmer(CCF 2)Therm	8.5	CC	MUL	T	ZZ	
92/01	NPCC	NE	MA	BECO	Northeast Energy Asso 1 & 2	198.3	CC	GAS	T	ZZ	
92/01	NPCC	NE	MA	EUA	Northeast Energy Asso	25	CC	GAS	T	ZZ	
92/01	NPCC	NE	NH	VTGP	Bio Energy (Claremont)	15	ST	BIO	T	ZZ	
92/01	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	24	UN	REF	L	ZZ	
92/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	20	UN	REF	L	ZZ	
92/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	79.9	UN	GAS	P	ZZ	
92/01	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	62	UN	GAS	T	ZZ	
92/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	86[c]	ZZ	UNK	P	ZZ	
92/01	SERC	FL	FL	FLPC	OCCIDENTAL CHEMICAL 3	1	CG	WH	P	CG	
92/01	SERC	FL	FL	FLPC	ST. JOE FOREST PRODUCTS 3	11	CG	WD	P	CG	
92/01	SERC	FL	FL	FLPL	ROYSTER PINEY POINT	18	CG	WH	P	CG	
92/01	SERC	FL	FL	HSTM	G. W. Ivey 8	2.5	IC	NG	P	U	
92/01	SERC	FL	FL	HSTM	G. W. Ivey 9	2.5	IC	NG	P	U	
92/01	SERC	FL	FL	KISM	Unknown	32	GT	NG	L	U	
92/01	SERC	VAC	NC	CAPO	FALLS DAM	3	HY	WAT	T	ZZ	
92/01	SERC	VAC	NC	CAPO	HOPE MILLS DAM	1	HY	WAT	T	ZZ	
92/01	SERC	VAC	NC	CAPO	JORDAN DAM	10	HY	WAT	T	ZZ	
92/01	SERC	VAC	UN	CAPO	UNDESIGNATED	7	UN	UNK	P	ZZ	
92/01	WSCC	CNV	CA	CDWR	DEVIL CANYON 3	80	HY	WAT	U	U	
92/01	WSCC	CNV	CA	CDWR	DEVIL CANYON 4	80	HY	WAT	U	U	
92/01	WSCC	CNV	CA	PG&E	PVUSA 2	1	SO	SUN	T	U	
92/01	WSCC	CNV	CA	PG&E	QF COGENERATION 92	53	CG	UNK	P	CG	
92/01	WSCC	CNV	CA	SMUD	CAMPBELL CG	49	CG	NG	P	U	
92/01	WSCC	CNV	NV	NEVP	QF MISCELLANEOUS	24	ZZ	UNK	P	ZZ	

[a] See page 115, footnote a.

[b] See page 115, footnote b.

[c] See page 115, footnote c.

Generating Unit Additions (Utility and Non-Utility)[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
92/01	WSCC	NWP	ID	IPC	TWIN EAGLE SMALL HYDRO	0	HY	WAT	P	ZZ	
92/01	WSCC	NWP	WA	PSPL	MARCH POINT COGEN	80	CG	NG	P	CG	
92/02	MAAC		NJ	AECO	PCLP - NUG 1	116	CT	NG	T	ZZ	
92/02	MAAC		NJ	GPUS	Consol.Nat.Gas - NUG	200[b]	GT	NG	L	ZZ	
92/02	MAAC		PA	GPUS	Oxbow,Cornwall - NUG	80[b]	FB	CUL	L	ZZ	
92/02	MAAC		PA	GPUS	Scrubgrass Power - NUG	80[b]	FB	CUL	L	ZZ	
92/02	SERC	VAC	UN	VIEP	ULTRASYSTEMS - HOPEWELL	57	ST	COL	P	ZZ	
92/03	ECAR		UN	APS	PURPA 1	49	ST	CUL	P	ZZ	
92/03	MAAC		NJ	PSCO	Passaic County RRF - NUG	40	ST	REF	P	ZZ	
92/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	0.4	HY	WAT	U	ZZ	
92/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	47	UN	GAS	T	ZZ	
92/04	ECAR		OH	CG&E	Woodsdale 2	77	GT	NG	L	U	
92/04	ECAR		OH	CG&E	Woodsdale 3	77	GT	NG	L	U	
92/04	ECAR		OH	CG&E	Woodsdale 4	77	GT	NG	L	U	
92/04	ECAR		OH	CG&E	Woodsdale 5	78	GT	NG	L	U	
92/04	ECAR		OH	CG&E	Woodsdale 6	77	GT	NG	L	U	
92/04	ECAR		PA	APS	Schenley	80	ST	CUL	P	ZZ	
92/04	ERCOT		TX	TUEC	COMANCHE PEAK # 2	1150	NP	UR	V	U	
92/04	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-300[c]	UN	UNK	P	ZZ	
92/04	NPCC	NE	CT	NU	Wndsr Lcks Hydroelec Ltd.	2.8	HY	WAT	T	ZZ	
92/04	NPCC	NE	VT	VTGP	Winooski One Partnership	5	HY	WAT	T	ZZ	
92/04	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	200	UN	GAS	P	ZZ	
92/04	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	60	UN	GAS	T	ZZ	
92/04	SERC	FL	FL	FLPC	CFR BIO-GEN CORPORATION 1	74	UN	WD	P	ZZ	
92/04	SERC	TVA	UN	TEVA	UNDETERMINED X1	350	UN	UNK	P	U	
92/04	SERC	VAC	SC	DUPC	BADCREEK 1	266	PS	WAT	U	U	
92/04	SERC	VAC	SC	DUPC	BADCREEK 2	266	PS	WAT	U	U	
92/04	SERC	VAC	UN	VIEP	JOHNSON GEN. SET 1	3	ST	WD	P	ZZ	
92/04	SERC	VAC	UN	VIEP	JOHNSON GEN. SET 2	3	ST	WD	P	ZZ	
92/04	SERC	VAC	UN	VIEP	JOHNSON GEN. SET 3	3	ST	WD	P	ZZ	
92/04	WSCC	RMP	CO	PSC	A.B. LATERAL	35	HY	WAT	T	ZZ	
92/04	WSCC	RMP	CO	PSC	LUDVIK AND POWERNET	32	CW	WH	T	ZZ	
92/04	WSCC	RMP	CO	PSC	SHAVANO FALLS	3	HY	WAT	T	ZZ	
92/05	ERCOT		TX	CPSA	J. K. SPRUCE #1	498	ST	COL	V	U	
92/05	MAAC		DE	DPLC	Star Enterprises - NUG	48[d]	ST	FO6	V	ZZ	
92/05	MAAC		PA	GPUS	Monroe Co. RR - NUG	6[b]	ST	REF	L	ZZ	
92/05	MAPP		MB	MHEB	LIMESTONE 8	120	HY	WAT	U	U	
92/05	MAPP		UN	NWPS	FUTURE CT 2	19.1	GT	FO2	P	U	
92/05	NPCC	NE	MA	CES	SEMASS Expansion	22.5	ST	REF	T	ZZ	
92/05	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	30	UN	REF	T	ZZ	
92/05	NPCC	NY	UN	COEN	NON-UTILITY GENERATORS	412	UN	GAS	L	ZZ	
92/05	SERC	VAC	GA	SOCG	STEVENS CREEK	11	HY	WAT	P	U	
92/05	SERC	VAC	SC	SOCG	PARR SHOALS	17	HY	WAT	P	U	
92/05	SERC	VAC	SC	SOCG	UNDETERMINED 2	93	GT	NG	P	U	
92/05	SERC	VAC	SC	SOCG	WILLIAMS HEAT RECOVERY	14	CW	WH	P	U	
92/05	SERC	VAC	UN	VIEP	BERMUDA HUNDRED	220	CC	NG	P	ZZ	
92/05	SERC	VAC	UN	VIEP	COMMONWEALTH COGEN	218	GT	NG	P	CG	
92/05	SPP	N	MO	MIPU	RALPH GREEN 1	20	CW	NG	L	U	
92/05	WSCC	CNV	CA	RDNG	UNIDENTIFIED COGEN 1	19	CG	ZZ	P	U	
92/05	WSCC	CNV	CA	RDNG	UNIDENTIFIED COGEN 2	19	CG	ZZ	P	U	

[a] See page 115, footnote a.

[b] See page 115, footnote b.

[c] Contract for firm purchase power expires.

[d] Delaware City #3 under new ownership.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
92/05	WSCC	CNV	NV	NEVP	QF MISCELLANEOUS	90	ZZ	UNK	P	ZZ	
92/05	WSCC	NWP	WA	PSPL	WHITE RIVER FLUME	14	HY	WAT	L	U	
92/06	MAAC		MD	PPCO	CC Component 1	127	CT	NG	L	U	
92/06	MAAC		NJ	PSCO	Hudson County RRF - NUG	38	ST	REF	P	ZZ	
92/06	MAAC		PA	GPUS	Broad Top - NUG	15[b]	FB	CUL	L	ZZ	
92/06	MAIN	WUM	WI	MARF	WILDWOOD 6-8	15	IC	FO2	P	U	
92/06	MAIN	WUM	WI	WPS	COGENERATION	35	ST	NG	P	CG	
92/06	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U	
92/06	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	17	HY	WAT	L	ZZ	
92/06	NPCC	QUE	QB	HYQB	LG 2A P.A. 4	316	HY	WAT	V	U	
92/06	SERC	FL	FL	FLPC	UNIVERSITY OF FLORIDA 1	3	CG	NG	P	CG	
92/06	SERC	FL	FL	FLPL	GENERAL PEAT 1	52	UN	ZZ	P	ZZ	
92/06	SERC	FL	FL	TALL	FLA. STATE UNIVERSITY	12.6	CC	NG	P	ZZ	
92/06	SERC	VAC	UN	VIEP	COMMONWEALTH COGEN	112	ST	COL	P	CG	
92/06	SERC	VAC	VA	VIEP	Chesterfield 8	141	CT	NG	U	U	
92/06	SERC	VAC	VA	VIEP	Chesterfield 8	64	CW	WH	U	U	
92/06	SPP	N	KS	KAGE	NUG.	30	UN	UNK	P	ZZ	
92/06	SPP	N	MO	SPRM	JRPS GT 2	71	GT	NG	P	U	
92/06	WSCC	RMP	CO	PSC	HORSE MOUNTAIN POWER GEN	25	CG	BIT	T	CG	
92/07	MAAC		NJ	PSCO	Campbell Soup - NUG	112	CW	NG	L	ZZ	
92/07	MAAC		NJ	PSCO	Mercer County RRF - NUG	16	ST	REF	P	ZZ	
92/07	MAPP		SA	SPC	SHAND 1	280	ST	LIG	V	U	
92/07	SERC	VAC	UN	VIEP	MULTRITRADE	76	ST	WD	P	ZZ	
92/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
92/07	WSCC	NWP	ID	USPN	MINIDOKA 1-5	12	HY	WAT	P	U	
92/07	WSCC	RMP	CO	PSC	SUNLAWN EASTSIDE	25	CG	BIT	T	CG	
92/07	WSCC	RMP	CO	USUC	TOWAOC	11	HY	WAT	T	U	
92/08	MAAC		UN	GPUS	Non-Utility Generation	17.5[b]	UN	UNK	L	ZZ	
92/08	MAPP		MB	MHEB	LIMESTONE 9	120	HY	WAT	U	U	
92/08	SERC	VAC	UN	VIEP	EMPORIA TES FACILITY	3	ST	WD	P	ZZ	
92/09	ECAR		PA	APS	Shannopin	80	ST	CUL	P	ZZ	
92/09	MAAC		UN	GPUS	Non-Utility Generation	82[b]	UN	UNK	L	ZZ	
92/09	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	44	UN	GAS	T	ZZ	
92/09	NPCC	QUE	QB	HYQB	LG 2A P.A. 5	316	HY	WAT	V	U	
92/09	SERC	VAC	UN	VIEP	ULTRASYSTEMS - BUENA VISTA	57	ST	COL	P	ZZ	
92/09	WSCC	RMP	CO	USUC	RIDGEWAY POWER PLANT	4	HY	WAT	T	U	
92/10	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	37.5	UN	GAS	L	ZZ	
92/10	WSCC	CNV	CA	RDNG	UNKNOWN PEAKING	25	CG	ZZ	P	CG	
92/10	WSCC	NWP	ID	IPC	MILNER HYDRO	0	HY	WAT	U	U	
92/11	MAPP		MB	MHEB	LIMESTONE 10	120	HY	WAT	U	U	
92/11	NPCC	NB	NB	NBPO	SIX ROADS #1	84	GT	FO2	P	U	
92/11	NPCC	NE	VT	VTGP	FAIRFAX FALLS	2.8	HY	WAT	P	U	
92/11	NPCC	NE	VT	VTGP	Ryegate - Decker Energy	18	ST	BIO	T	ZZ	
92/11	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	23	UN	REF	P	ZZ	
92/11	SERC	FL	FL	FLPC	Debary 7-10	280	GT	FO2	P	U	
92/12	MAAC		PA	GPUS	Panther Creek - NUG	80[b]	FB	CUL	L	ZZ	
92/12	NPCC	NE	MA	NEES	RP VERNON	20	HY	WAT	L	U	
92/12	NPCC	NE	VT	VTGP	Bio-Energy Corp.	15	ST	BIO	T	ZZ	
92/12	NPCC	NE	VT	VTGP	Great Falls Hydro	0.4	HY	WAT	T	ZZ	
92/12	NPCC	NE	VT	VTGP	No. Springfield-Decker Energy	18	ST	BIO	T	ZZ	

---

[a] See page 115, footnote a.

[b] See page 115, footnote b.

Generating Unit Additions (Utility and Non-Utility)[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
92/12	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	30	UN	REF	P	ZZ	
92/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	49	UN	GAS	T	ZZ	
92/12	NPCC	ONT	ON	ONHY	DARLINGTON 4	881	CD	UR	U	U	
92/12	NPCC	QUE	QB	HYQB	LG 2A P.A. 6	316	HY	WAT	V	U	
92/12	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	119	UN	UNK	P	ZZ	
92/12	NPCC	QUE	QB	HYQB	TAG	448	GT	FO2	P	U	
92/12	SERC	VAC	UN	VIEP	HOLLYWOOD COGEN	3	IC	OIL	P	CG	
92/12	SERC	VAC	UN	VIEP	I-95 LANDFILL	3	GT	GAS	P	ZZ	
92/12	SERC	VAC	UN	VIEP	RICHMOND LANDFILL	3	GT	GAS	P	ZZ	
92/12	SERC	VAC	UN	VIEP	SONOCO	3	ST	COL	P	ZZ	
92/12	SERC	VAC	UN	VIEP	SOUTH RIVER USED OIL	2	ST	OIL	P	ZZ	
SUBTOTAL						11465					
93/01	ECAR		MI	CP	MCV Contract	108	CA	NG	P	ZZ	
93/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
93/01	ECAR		UN	PSI	Unidentified	14	UN	UNK	P	ZZ	
93/01	ERCOT		TX	BEPC	UNDESIGNATED	104	GT	NG	P	U	
93/01	MAAC		NJ	GPUS	Bergen Co. RR - NUG	80[b]	ST	REF	L	ZZ	
93/01	MAAC		UN	AECO	Small Power Producer 2	15	GT	NG	P	ZZ	
93/01	MAAC		UN	PSCO	Non-Utility Bids	100	UN	UNK	P	ZZ	
93/01	MAAC		UN	PSCO	Small QF's - NUG	20	UN	UNK	P	ZZ	
93/01	NPCC	NE	CT	NU	ARS Power 1	32.2	ST	BIO	T	ZZ	
93/01	NPCC	NE	CT	NU	Flagg/Uniroyal (CCF 3)	24	ST	BIO	T	ZZ	
93/01	NPCC	NE	ME	BHE	MILFORD	1.7	HY	WAT	P	U	
93/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	2.8	HY	WAT	P	ZZ	
93/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	55	UN	COL	P	ZZ	
93/01	NPCC	ONT	ON	ONHY	LAKE GIBSON 1-2	5	HY	WAT	P	U	
93/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	86[c]	ZZ	UNK	P	ZZ	
93/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 09 (UNK)	0	CG	NG	P	CG	
93/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 01	19	UN	REF	P	ZZ	
93/01	SERC	FL	FL	TAEC	HARDEE POWER STATION	220	CC	NG	P	ZZ	
93/01	SERC	FL	FL	TAEC	HARDEE POWER STATION	75	CT	NG	P	ZZ	
93/01	SERC	FL	FL	TAEC	REFUSE PLANT	8	UN	REF	P	ZZ	
93/01	SERC	VAC	SC	DUPC	BADCREEK 3	266	PS	WAT	U	U	
93/01	SERC	VAC	SC	DUPC	BADCREEK 4	266	PS	WAT	U	U	
93/01	WSCC	CNV	AZ	SDGE	QF COGENERATION	50	CG	NG	P	CG	
93/01	WSCC	CNV	CA	PG&E	PVUSA 3	1	SO	SUN	T	U	
93/01	WSCC	CNV	CA	PG&E	QF COGENERATION 93	121	CG	UNK	P	CG	
93/01	WSCC	CNV	CA	PG&E	QF HYDRO 93	2	HY	WAT	P	ZZ	
93/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 93	6	ZZ	UNK	P	ZZ	
93/01	WSCC	CNV	NV	NEVP	QF MISCELLANEOUS	28	ZZ	UNK	P	ZZ	
93/01	WSCC	NWP	ID	IPC	SWAN FALLS REBUILD	5	HY	WAT	L	U	
93/01	WSCC	NWP	WA	TCL	WYNOCHEE 1	0	HY	WAT	T	U	
93/02	WSCC		MX	CFE	CERRO PRIETO IV UNIT 1	19	GE	GST	P	U	
93/03	MAAC		PA	GPUS	Interpower - NUG	80[b]	FB	CUL	L	ZZ	
93/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79	UN	GAS	T	ZZ	
93/04	ECAR		OH	CG&E	Woodsdale 1	77	GT	NG	L	U	
93/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
93/04	WSCC	RMP	CO	PSC	WEST POWER 1	122	CG	NG	U	CG	
93/05	MAAC		MD	DPLC	Easton Unidentified	12.6	IC	FO2	P	U	

---

[a] See page 115, footnote a.

[b] See page 115, footnote b.

[c] See page 115, footnote c.

Generating Unit Additions (Utility and Non-Utility)[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
93/05	MAAC		MD	PPCO	CC Component 2	127	CT	NG	L	U	
93/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	L	U	
93/05	MAPP		UN	ISU	FUTURE GT 1	50	GT	NG	P	U	
93/05	NPCC	NY	NY	CEHG	NON-UTILITY GENERATORS	4.5	HY	WAT	T	ZZ	
93/05	NPCC	NY	NY	COEN	BIDDING CAPACITY	200	UN	UNK	P	ZZ	
93/05	NPCC	NY	NY	ROGE	NON-UTILITY GENERATORS	55	UN	GAS	P	ZZ	
93/05	NPCC	NY	UN	COEN	NON-UTILITY GENERATORS	483	UN	GAS	L	ZZ	
93/05	WSCC		MX	CFE	CERRO PRIETO IV UNIT 2	19	GE	GST	P	U	
93/06	MAIN	SCI	IL	CWLP	LAKESIDE GT1	36	CT	NG	P	U	
93/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U	
93/06	MAIN	WUM	WI	WEP	HYDRO	3	HY	WAT	P	U	
93/06	NPCC	NE	MA	NEES	RP BELLOWS FALLS	6	HY	WAT	P	U	
93/06	NPCC	NY	NY	NIMP	SOUTH GLENS FALLS	13.8	HY	WAT	P	U	
93/06	SERC	SOU	MS	SOMI	MOSELLE	80	CT	NG	P	U	
93/06	SERC	VAC	UN	VIEP	BRASFIELD DAM	1	HY	WAT	P	ZZ	
93/06	WSCC	CNV	NV	NEVP	CLARK 5	70	CT	NG	T	U	
93/06	WSCC	CNV	NV	NEVP	CLARK 6	70	CT	NG	T	U	
93/06	WSCC	CNV	NV	NEVP	CLARK 9	90	CW	NG	T	U	
93/06	WSCC	CNV	NV	NEVP	QF MISCELLANEOUS	170	ZZ	UNK	P	ZZ	
93/07	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	57	UN	GAS	T	ZZ	
93/07	SERC	FL	FL	FLPC	GENERAL PEAT RESOURCES 1	52	UN	PEA	P	ZZ	
93/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
93/07	WSCC	NWP	OR	PGE	MISC. RESOURCES	30	ZZ	UNK	P	ZZ	
93/09	WSCC	CNV	CA	SDGE	QF SOLAR	80	SO	SUN	P	ZZ	
93/10	MAPP		SA	SPC	FUTURE PEAKING 1	46	GT	NG	P	U	
93/10	NPCC	NS	NS	NSPC	NON-UTILITY GENERATOR	15	UN	UNK	P	ZZ	
93/10	NPCC	NS	NS	NSPC	PT. ACONI 1	165	ST	BIT	U	U	
93/10	SERC	FL	FL	JACO	NAS 1	50	CC	NG	P	U	
93/10	SERC	TVA	UN	TEVA	UNDETERMINED X2	350	UN	UNK	P	U	
93/11	NPCC	NB	NB	NBPO	BELLEDUNE #2	440	ST	COL	U	U	
93/11	NPCC	NB	NB	NBPO	WOOD UNIT #1	25	ST	WD	P	ZZ	
93/11	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	54.7	UN	GAS	T	ZZ	
93/11	SERC	FL	FL	FLPC	Intercession City 7-10	280	GT	FO2	P	U	
93/11	SERC	FL	FL	ORLA	Indian River CT C	77	GT	NG	P	U	
93/11	SERC	FL	FL	ORLA	Indian River CT D	77	GT	NG	P	U	
93/12	ERCOT		TX	HL&P	OCCIDENTAL-NUG	-225[b]	GT	NG	P	ZZ	
93/12	NPCC	QUE	QB	HYQB	BRISAY 1-2	460	HY	WAT	U	U	
93/12	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	55	UN	UNK	P	ZZ	
93/12	NPCC	QUE	QB	HYQB	TAG	348	GT	FO2	P	U	
93/12	SERC	VAC	VA	VIEP	Clover 1	196	ST	COL	T	U	J
93/12	WSCC	NWP	WA	PSPL	THUNDER CREEK	6	HY	WAT	L	U	
93/UN	ASCC		AK	SES	SEWARD 1	3	IC	FO2	P	U	
93/UN	ASCC		AK	SES	SEWARD 2	3	IC	FO2	P	U	
SUBTOTAL						6593					
94/01	ECAR		MI	CP	MCV Contract	109	CA	NG	P	ZZ	
94/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
94/01	ERCOT		TX	BEPC	UNDESIGNATED	103	GT	NG	P	U	
94/01	MAAC		NJ	AECO	KCS - NUG 1	202	ST	BIT	T	ZZ	
94/01	MAAC		NJ	AECO	VMS - NUG 1	45	CT	NG	P	ZZ	

[a] See page 115, footnote a.

[b] Contract for firm purchase power expires.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
94/01	MAAC		UN	AECO	CCLP - NUG 1	230	ST	BIT	T	ZZ	
94/01	MAAC		UN	AECO	Small Power Producer 3	15	ST	BIT	P	ZZ	
94/01	MAAC		UN	PSCO	Non-Utility Bids	100	UN	UNK	P	ZZ	
94/01	MAAC		UN	PSCO	Small QF's - NUG	20	UN	UNK	P	ZZ	
94/01	NPCC	NE	CT	NU	Flagg/Perkin Elmer(CCF 2)Therm	0.85	CC	MUL	T	ZZ	
94/01	NPCC	NY	NY	LOIL	BIDDING CAPACITY	150	UN	UNK	P	ZZ	
94/01	NPCC	NY	NY	NIMP	OSWEGO FALLS WEST	5.5	HY	WAT	P	U	
94/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	73[b]	ZZ	UNK	P	ZZ	
94/01	SERC	FL	FL	FLPL	Martin Combined Cycle 1	385	CC	NG	P	U	
94/01	SERC	FL	FL	LALW	Unknown 1	50	GT	NG	P	U	
94/01	SERC	FL	FL	TAEC	CITY OF TAMPA REFUSE	19.5	UN	REF	P	ZZ	
94/01	SERC	SOU	AL	ALEC	MCWILLIAMS 4	100	CT	NG	P	U	
94/01	WSCC	AZN	AZ	APS	SOLAR 1	2	SO	SUN	U	U	
94/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG	
94/01	WSCC	CNV	CA	PG&E	QF COGENERATION 94	103	CG	UNK	P	CG	
94/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 94	5	ZZ	UNK	P	ZZ	
94/01	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 94	20	HY	WAT	L	U	
94/01	WSCC	NWP	WA	TCL	RUTH CREEK	0	HY	WAT	T	U	
94/01	WSCC	NWP	WA	TCL	SWAMP CREEK	0	HY	WAT	T	U	
94/02	WSCC	AZN	AZ	USLC	WADDELL (4)	45	PS	WAT	U	U	
94/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
94/03	SPP	SE	AR	AREC	HS 9 UNIT #1	6	HY	WAT	T	U	
94/03	SPP	SE	AR	AREC	HS 9 UNIT #2	6	HY	WAT	T	U	
94/03	SPP	SE	AR	AREC	HS 9 UNIT #3	5	HY	WAT	T	U	
94/03	WSCC		MX	CFE	ENSENADA 1	150	ST	FO6	T	U	
94/04	ECAR		OH	CG&E	Woodsdale 7	77	GT	NG	L	U	
94/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
94/04	SERC	FL	FL	FLPC	GENERAL PEAT RESOURCES 2	52	UN	PEA	P	ZZ	
94/04	WSCC	RMP	CO	CCS	STANLEY CANYON PUMP HYDRO	64	PS	WAT	T	U	
94/04	WSCC	RMP	CO	PSC	FT LUPTON COGEN	150	CG	NG	L	CG	
94/05	MAAC		DE	DPLC	Hay Road 4	150	CW	WH[c]	P	U	
94/05	MAAC		UN	GPUS	Combustion Turbines	200	GT	NG	P	U	
94/05	MAAC		UN	GPUS	Non-Utility Generation	325[d]	UN	UNK	P	ZZ	
94/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	L	U	
94/05	MAPP		UN	NSP	FUTURE PEAKER 1	100	UN	UNK	P	U	
94/05	NPCC	NY	NY	CEHG	BIDDING CAPACITY	30	UN	UNK	P	ZZ	
94/05	NPCC	NY	NY	NIMP	BIDDING CAPACITY	120	UN	UNK	P	ZZ	
94/05	NPCC	NY	NY	POAS	NON-UTILITY GENERATORS	122	UN	GAS	P	ZZ	
94/05	NPCC	NY	NY	ROGE	BIDDING CAPACITY	50	UN	UNK	P	ZZ	
94/05	SERC	SOU	GA	GEPC	PEAKING	40	GT	GAS	P	U	J
94/05	SERC	SOU	GA	GEPC	PEAKING	790	GT	GAS	P	U	
94/05	SERC	SOU	GA	SAEP	PEAKING	39	GT	GAS	P	U	J
94/05	SERC	SOU	GA	SAEP	PEAKING	79	GT	GAS	P	U	
94/05	SERC	VAC	SC	SOCG	UNDETERMINED 3	93	GT	NG	P	U	
94/06	ERCOT		TX	TUEC	UNSPECIFIED	300[e]	UN	UNK	P	U	
94/06	MAAC		MD	PPCO	Muni. Solid Waste	50	ST	REF	P	U	
94/06	MAIN	SCI	IL	CWLP	LAKESIDE 4	20[f]	CA	COL	P	U	
94/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U	
94/06	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U	
94/06	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 02	8	UN	REF	P	ZZ	

[a] See page 115, footnote a.

[b] See page 115, footnote c.

[c] Waste heat generated by Hay Road 1, 2, and 3.

[d] See page 115, footnote b.

[e] Unspecified resources, may be one or more of the following: purchases from qualifying facilities (cogenerators and/or small power producers) or other utilities, simple cycle or combined cycle combustion turbines, additional reductions in demand resulting from conservation or load management programs, or solid fueled baseload generating units.

[f] Part of CWLP's coal gasification/combined cycle demonstration plant.

Generating Unit Additions (Utility and Non-Utility)[a]
(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
94/06	SERC	SOU	MS	SOMI	MOSELLE	40	CW	WH	P	U	
94/06	SERC	VAC	NC	DUPC	LINCOLN COUNTY	216	GT	FO2	L	U	
94/06	SERC	VAC	UN	VIEP	BECKLEY COGEN	137	ST	COL	P	CG	
94/06	WSCC	CNV	NV	NEVP	CLARK 10	90	CW	NG	T	U	
94/06	WSCC	CNV	NV	NEVP	CLARK 7	70	CT	NG	T	U	
94/06	WSCC	CNV	NV	NEVP	CLARK 8	70	CT	NG	T	U	
94/06	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 1	70	GT	FO2	P	U	
94/06	WSCC	NWP	WA	TCL	BARRIER 1-2	0	HY	WAT	L	U	
94/07	NPCC	NY	NY	NIMP	HUDSON FALLS	36.1	HY	WAT	L	U	
94/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
94/07	WSCC	RMP	SD	BHPL	CT 5	40	GT	NG	P	U	
94/09	ERCOT		TX	TUEC	UNSPECIFIED	-300[b]	UN	UNK	P	U	
94/09	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79	UN	GAS	T	ZZ	
94/09	WSCC	NWP	WA	PSPL	NOISY CREEK	10	HY	WAT	L	U	
94/09	WSCC	NWP	WA	PSPL	SWIFT CREEK	9	HY	WAT	L	U	
94/09	WSCC	NWP	WA	SCL	SOUTH FORK TOLT	15	HY	WAT	T	U	
94/10	MAPP		SA	SPC	FUTURE HYDRO I	35	HY	WAT	P	U	
94/10	NPCC	NS	NS	NSPC	NON-UTILITY GENERATOR	15	UN	UNK	P	ZZ	
94/10	NPCC	ONT	ON	ONHY	KIPLING EXTN. 1	66	HY	WAT	P	U	
94/10	SERC	TVA	TN	TEVA	WATTS BAR NO. 2	1170	NP	UR	V	U	
94/10	WSCC	NWP	WA	PSPL	NOOKSACK FALLS	8	HY	WAT	L	U	
94/11	NPCC	NB	NB	NBPO	GRAND LAKE #9	170[c]	ST	COL	P	U	
94/11	NPCC	NY	NY	NEYE	BIDDING CAPACITY	100	UN	UNK	P	ZZ	
94/11	NPCC	NY	NY	NIMP	BIDDING CAPACITY	230	UN	UNK	P	ZZ	
94/12	ERCOT		TX	HL&P	DOW CHEMICAL-NUG	-325[b]	GT	NG	P	ZZ	
94/12	NPCC	QUE	QB	HYQB	LA GRANDE 1-6	684	HY	WAT	U	U	
94/12	NPCC	QUE	QB	HYQB	LAFORGE 1 1-6	829	HY	WAT	U	U	
94/12	SERC	VAC	VA	VIEP	Clover 2	196	ST	COL	T	U	J
94/UN	MAIN	SCI	IL	CIL	COMBUSTION TURBINE	80	CT	NG	P	U	
SUBTOTAL						9292					
95/01	ECAR		MI	CP	MCV Contract	108	CA	NG	P	ZZ	
95/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
95/01	ECAR		UN	EKPC	Unknown	240[d]	UN	UNK	P	U	
95/01	ECAR		UN	PSI	Unidentified	44	UN	UNK	P	ZZ	
95/01	ERCOT		TX	BEPC	UNDESIGNATED	300	CC	NG	P	U	
95/01	ERCOT		TX	HL&P	GAS TURBINE	80	GT	NG	P	U	
95/01	ERCOT		TX	HL&P	GAS TURBINE	80	GT	NG	P	U	
95/01	MAAC		NJ	AECO	ACMUA - NUG 1	24	ZZ	REF	P	ZZ	
95/01	MAAC		UN	AECO	Small Power Producer 4	5	ST	BIT	P	ZZ	
95/01	MAAC		UN	PSCO	Small QF's -NUG	20	UN	UNK	P	ZZ	
95/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	313[e]	ZZ	UNK	P	U	
95/01	NPCC	NY	NY	ORRU	BIDDING CAPACITY	140	UN	GAS	L	ZZ	
95/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	73[f]	ZZ	UNK	P	ZZ	
95/01	SERC	FL	FL	FLPC	GENERAL PEAT RESOURCES 3	52	UN	PEA	P	ZZ	
95/01	SERC	FL	FL	FLPC	P & G CELLULOSE 2	2	UN	WD	P	ZZ	
95/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 10 (UNK)	0	CG	NG	P	CG	
95/01	SERC	FL	FL	FLPL	Martin Combined Cycle 2	385	CC	NG	P	U	
95/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 03	19	UN	REF	P	ZZ	
95/01	SERC	FL	FL	JACO	UNKNOWN 01	10	UN	UNK	P	ZZ	

[a] See page 115, footnote a.

[b] Contract for firm purchase power expires.

[c] Final sizing of this unit is undecided.

[d] Best combination of combustion turbines, load management, dispersed generation, and/or firm purchases.

[e] Identified (but not planned) potential resource(s) added to achieve a nominal 20% reserve margin. Viable contingency resources potentially available to meet this future requirement exceed the amount listed and include the expansion of DSM programs, additional NUGs, additional purchases, or additional utility generation.

[f] See page 115, footnote c.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
95/01	WSCC		BC	BCHA	KEMANO 9-12	300	HY	WAT	P	ZZ	
95/01	WSCC		MX	CFE	CERRO PRIETO IV UNIT 3	19	GE	GST	P	U	
95/01	WSCC	CNV	CA	CDWR	MOJAVE SIPHON	32	HY	WAT	P	U	
95/01	WSCC	CNV	CA	LDWP	HARBOR CC	160	CT	NG	P	U	
95/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG	
95/01	WSCC	CNV	CA	NCPA	UNID. GENERIC BASE	25	ZZ	UNK	P	U	
95/01	WSCC	CNV	CA	PG&E	QF COGENERATION 95	36	CG	UNK	P	CG	
95/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 95	33	ZZ	UNK	P	ZZ	
95/01	WSCC	CNV	CA	SMUD	COGEN BASE LOAD	196	CG	UNK	P	CG	
95/01	WSCC	NWP	ID	IPC	TWIN FALLS EXPANSION	5	HY	WAT	L	U	
95/03	ERCOT		TX	HL&P	BAYOU COGENERATION-NUG	-270[b]	GT	NG	P	CG	
95/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
95/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
95/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
95/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
95/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
95/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
95/04	ERCOT		TX	TUEC	TWIN OAK # 1	750	ST	LIG	U	U	
95/04	ERCOT		TX	TUEC	UNSPECIFIED	300[c]	UN	UNK	P	U	
95/04	NPCC	ONT	ON	ONHY	SMOKEY FALLS EXTN. 1-2	182	HY	WAT	P	U	
95/04	WSCC	RMP	CO	PSC	COLO. POWER PROJECT #2	68	CG	NG	T	CG	
95/04	WSCC	RMP	CO	PSC	SILVER LAKE	2	HY	WAT	T	ZZ	
95/05	MAAC		UN	GPUS	Combustion Turbines	600	CT	NG	P	U	
95/05	MAPP		NE	OPPD	FUTURE GT 1	80	GT	FO2	P	U	
95/05	NPCC	NE	MA	NEES	RP MANCH 9,10,11	295[d]	ST	NG	L	U	
95/05	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	12	ST	GAS	L	ZZ	
95/05	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	40	UN	REF	L	ZZ	
95/05	SERC	SOU	AL	ALAP	PEAKING	378	GT	GAS	P	U	
95/05	SERC	SOU	FL	GUPC	PEAKING	126	GT	GAS	P	U	
95/05	SERC	SOU	GA	GEPC	PEAKING	504	GT	GAS	P	U	
95/05	SERC	SOU	GA	GEPC	PEAKING	63	GT	GAS	P	U	J
95/05	SERC	SOU	GA	SAEP	PEAKING	63	GT	GAS	P	U	J
95/05	SERC	VAC	SC	SOCG	UNDETERMINED 4	93	GT	NG	P	U	
95/05	SERC	VAC	UN	UNK	UNDESIGNATED	500	UN	UNK	P	U	
95/05	SPP	N	MO	MIPU	RALPH GREEN 4	72	GT	NG	L	U	
95/05	SPP	N	MO	STJO	LAKE ROAD 8	75	GT	NG	P	U	
95/05	WSCC		MX	CFE	CERRO PRIETO IV UNIT 4	19	GE	GST	P	U	
95/05	WSCC	CNV	CA	RDNG	SPRING CREEK PS	50	PS	WAT	L	U	
95/06	MAIN	WUM	WI	MGE	COMBUSTION TURBINE	72	UN	NG	P	U	
95/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U	
95/06	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U	
95/06	MAIN	WUM	WI	WPS	LANDFILL GAS	3	ST	GAS	P	U	
95/06	MAIN	WUM	WI	WPS	MASS BURN	4	ST	REF	P	U	
95/06	NPCC	NE	MA	CES	CES CC 1	96.7[e]	CC	NG	P	U	
95/06	SERC	FL	FL	FLPL	BECHTEL INDIANTOWN	300	CG	COL	P	CG	
95/06	SERC	VAC	NC	DUPC	LINCOLN COUNTY	504	GT	FO2	L	U	
95/06	SERC	VAC	SC	SOCA	CROSS STEAM UNIT #1	520	ST	BIT	P	U	
95/06	SPP	N	KS	EMDE	RIVERTON 6	32	ST	NG	P	U	
95/06	SPP	N	MO	EMDE	ENERGY CENTER 3	75	CA	NG	P	U	
95/06	SPP	WC	OK	GRRD	FT. GIBSON 5 & 6	25	HY	WAT	P	U	

[a] See page 115, footnote a.

[b] Contract for firm purchase power expires.

[c] See page 128, footnote e.

[d] Units repowered by adding new combustion turbines and new heat recovery steam generators to existing steam units.

[e] Hypothetical unit to fill anticipated resource requirement. Actual resources may come from some other resources.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
95/06	SPP	WC	OK	OMPA	UNKNOWN	35	GT	NG	P	U	
95/06	WSCC	CNV	CA	SDGE	COMBINED CYCLE 1	144	CT	NG	P	U	
95/06	WSCC	CNV	CA	SDGE	COMBINED CYCLE 1	86	CW	WH	P	U	
95/06	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 2	70	GT	FO2	P	U	
95/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
95/07	WSCC	NWP	OR	PGE	MISC. RESOURCES	30	ZZ	UNK	P	ZZ	
95/09	WSCC	NWP	WA	TCL	ELKHORN 1-2	0	HY	WAT	L	U	
95/10	ECAR		MD	APS	AES Cumberland	180	ST	COL	P	ZZ	
95/10	ECAR		UN	APS	PURPA 2	130	ST	COG	P	ZZ	
95/10	ECAR		UN	APS	PURPA Contingency	-25[b]	UN	UNK	P	ZZ	
95/10	MAPP		SA	SPC	FUTURE PEAKING 2	46	GT	NG	P	U	
95/10	NPCC	NS	NS	NSPC	NEW SITE B 1	100	GT	FO2	P	U	
95/10	WSCC		AB	TAUC	NEW GENERATION	200	ZZ	UNK	P	U	
95/11	NPCC	ONT	ON	ONHY	HARMON EXTN. 1	74	HY	WAT	P	U	
95/11	SERC	FL	FL	FLPC	Combustion Turbine 1	120	GT	FO2	P	U	
95/12	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-77[c]	UN	UNK	P	ZZ	
95/12	NPCC	QUE	QB	HYQB	LA GRANDE 7-12	684	HY	WAT	U	U	
95/12	NPCC	QUE	QB	HYQB	LAFORGE 2 1-2	270	HY	WAT	P	U	
SUBTOTAL						11489					
96/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
96/01	ERCOT		TX	HL&P	ADDITIONAL CAPACITY NEED	200[d]	UN	UNK	P	U	
96/01	ERCOT		TX	HL&P	COMB. CYCLE CONVERSION	160	CW	WH	P	U	
96/01	ERCOT		TX	ST&M	SAN MIGUEL #2	200	ST	LIG	P	U	J
96/01	ERCOT		TX	TMPA	UNDESIGNATED	100	GT	NG	P	U	
96/01	MAAC		NJ	AECO	CMCUA - NUG 1	12[e]	ZZ	REF	P	ZZ	
96/01	NPCC	NE	ME	BHE	VEAZIE	5	HY	WAT	P	U	
96/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	502[f]	ZZ	UNK	P	U	
96/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	72[g]	ZZ	UNK	P	ZZ	
96/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 11 (UNK)	0	CG	NG	P	CG	
96/01	SERC	FL	FL	FLPL	IND. COGENERATOR 03	0	CG	NG	P	CG	
96/01	SERC	FL	FL	FLPL	Integrated Coal Unit 1	768	IG	BIT	P	U	
96/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY EXP. 01	37.5	UN	REF	P	ZZ	
96/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY EXP. 02	30	UN	REF	P	ZZ	
96/01	SERC	FL	FL	HSTM	G. W. Ivey 10	2.5	IC	NG	P	U	
96/01	SERC	FL	FL	TAEC	CT #1	67.1	GT	FO2	P	U	
96/01	WSCC	AZN	AZ	APS	GENERIC COGEN 1	4	CG	UNK	P	CG	
96/01	WSCC	AZN	TX	EPE	GENERIC STATION #1	70	GT	NG	P	U	
96/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	3	CG	UNK	P	CG	
96/01	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 96	1	HY	WAT	P	U	
96/01	WSCC	CNV	CA	SMUD	COGEN BASE LOAD	49	CG	UNK	P	CG	
96/01	WSCC	CNV	CA	SMUD	UNIDENTIFIED PEAKING	147	ZZ	UNK	P	U	
96/01	WSCC	NWP	WA	TCL	GLACIER CREEK	0	HY	WAT	L	U	
96/01	WSCC	NWP	WA	TCL	WELLS CREEK	0	HY	WAT	L	U	
96/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
96/03	SPP	N	MO	KACP	COMB. TURBINE 1	105	GT	NG	P	U	
96/03	SPP	N	MO	KACP	COMB. TURBINE 2	105	GT	NG	P	U	
96/03	WSCC		MX	CFE	ENSENADA 2	150	ST	FO6	P	U	
96/04	ECAR		OH	CG&E	Woodsdale 8	77	GT	NG	L	U	
96/04	ECAR		OH	CG&E	Woodsdale 9	77	GT	NG	L	U	

[a] See page 115, footnote a.

[b] PURPA contingency to recognize that not all of the PURPA capacity will finally be developed.

[c] Contract for firm purchase power expires.

[d] Capacity needed to meet HL&P's minimum reserve requirement.

[e] Incinerator with steam turbine.

[f] See page 127, footnote e.

[g] See page 115, footnote c.

Generating Unit Additions (Utility and Non-Utility)[a]
(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
96/04	ECAR		OH	CG&E	Woodsdale 10	78	GT	NG	L	U	
96/04	ECAR		OH	CG&E	Woodsdale 11	77	GT	NG	L	U	
96/04	ECAR		OH	CG&E	Woodsdale 12	77	GT	NG	L	U	
96/04	ECAR		UN	CG&E	New GT 1	65	GT	NG	P	U	
96/04	ECAR		UN	CG&E	New GT 2	65	GT	NG	P	U	
96/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
96/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
96/04	ERCOT		TX	TUEC	TWIN OAK # 2	750	ST	LIG	U	U	
96/04	WSCC	RMP	CO	PSC	COLUMBINE POWER PROJ	80	ST	BIT	T	ZZ	
96/04	WSCC	RMP	CO	PSC	FT ST VRAIN	330	ST	NG	P	U	
96/05	MAAC		MD	DPLC	Easton Unidentified	15	IC	FO2	P	U	
96/05	MAAC		MD	PPCO	CC Component 3	127	CT	NG	L	U	
96/05	MAAC		UN	DPLC	Unidentified NUG	100	UN	UNK	P	ZZ	
96/05	MAAC		UN	GPUS	Combined Cycle	100	CW	NG	P	U	
96/05	MAAC		UN	GPUS	Combustion Turbines	100	GT	NG	P	U	
96/05	MAAC		UN	GPUS	Combustion Turbines	200	CT	NG	P	U	
96/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	P	U	
96/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	P	U	
96/05	MAPP		IA	IPR	PLEASANT HILL 3	35	GT	FO2	P	U	
96/05	MAPP		IA	IPR	PLEASANT HILL 4	35	GT	FO2	P	U	
96/05	NPCC	ONT	ON	ONHY	LITTLE LONG EXTN. 1	51	HY	WAT	P	U	
96/05	SERC	SOU	AL	ALAP	PEAKING	252	GT	GAS	P	U	
96/05	SERC	SOU	GA	GEPC	ROCKY MTN 1-3	848	PS	WAT	U	U	
96/05	SERC	VAC	SC	SOCG	UNDETERMINED 5	375	ST	COL	P	U	
96/05	SERC	VAC	UN	UNK	UNDESIGNATED	350	UN	UNK	P	U	
96/05	SPP	N	MO	MIPU	PLANT X 1	100	ST	UNK	P	U	
96/05	SPP	N	MO	MIPU	RALPH GREEN 2	20	CW	NG	L	U	
96/06	MAAC		MD	BCCO	Perryman 51	131	GT	NG	P	U	
96/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U	
96/06	SERC	SOU	AL	ALEC	CAES 2[b]	110	ZZ	NG	P	U	
96/06	SERC	VAC	NC	DUPC	LINCOLN COUNTY	432	GT	FO2	L	U	
96/06	SPP	N	KS	KAGE	NUG	30	UN	UNK	P	ZZ	
96/06	SPP	N	MO	EMDE	UNKNOWN 96	32	GT	NG	P	U	
96/06	WSCC	CNV	CA	SDGE	COMBINED CYCLE 2	144	CT	NG	P	U	
96/06	WSCC	CNV	CA	SDGE	COMBINED CYCLE 2	86	CW	WH	P	U	
96/06	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 3	70	GT	FO2	P	U	
96/06	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 4	70	GT	FO2	P	U	
96/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
96/09	ECAR		WV	AEP	Philip Sporn 3-4 PFBC	320	PB	COL	P	U	
96/10	MAPP		SA	SPC	FUTURE FOSSIL 1	273	ST	LIG	P	U	
96/10	SERC	TVA	UN	TEVA	UNDETERMINED X3	500	UN	UNK	P	U	
96/10	WSCC		AB	TAUC	NEW GENERATION	200	ZZ	UNK	P	U	
96/11	NPCC	NE	MA	MMWE	STONYBROOK 3 CC	200	CC	NG	P	U	
96/11	NPCC	NE	VT	VTGP	NEWPORT 2	3.2	HY	WAT	P	U	
96/11	NPCC	ONT	ON	ONHY	LITTLE JACKFISH 1-2	129	HY	WAT	P	U	
96/11	SERC	FL	FL	FLPC	Combustion Turbine 2-3	240	GT	FO2	P	U	
96/12	ERCOT		TX	HL&P	MALAKOFF #1	645	ST	LIG	T	U	
96/12	ERCOT		TX	WETU	RIO PECOS #5	88	CT	NG	P	U	
96/12	NPCC	QUE	QB	HYQB	EASTMAIN 1 1-3	465	HY	WAT	P	U	
96/12	NPCC	QUE	QB	HYQB	MANIC 3 A 1-2	620	HY	WAT	P	U	

[a] See page 115, footnote a.

[b] Compressed air energy storage.

Generating Unit Additions (Utility and Non-Utility)[a]
(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
96/12	NPCC	QUE	QB	HYQB	TAG	248	GT	FO2	P	U	
SUBTOTAL						12980					
97/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
97/01	ECAR		UN	EKPC	Unknown	60[b]	UN	UNK	P	U	
97/01	ECAR		UN	PSI	Unidentified	64	UN	UNK	P	ZZ	
97/01	ERCOT		TX	HL&P	ADDITIONAL CAPACITY NEED	200[c]	UN	UNK	P	U	
97/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	430[d]	ZZ	UNK	P	U	
97/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	75[e]	ZZ	UNK	P	ZZ	
97/01	SERC	FL	FL	FLPL	BIOMASS FACILITY 01	10	UN	WD	P	ZZ	
97/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 12 (UNK)	0	CG	NG	P	CG	
97/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 04	27	UN	REF	P	ZZ	
97/01	SERC	FL	FL	KISM	Unknown	20	ST	BIT	P	U	
97/01	SERC	FL	FL	ORLA	Stanton Energy Center 2	440	ST	BIT	P	U	
97/01	SERC	FL	FL	TAEC	CT #2	67.1	GT	FO2	P	U	
97/01	WSCC	AZN	AZ	APS	GENERIC COGEN 2	4	CG	UNK	P	CG	
97/01	WSCC	CNV	CA	LDWP	GENERIC 1997	100	ZZ	UNK	P	U	
97/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG	
97/01	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 97	109	HY	WAT	P	U	
97/01	WSCC	NWP	OR	PGE	MISC. RESOURCES	135	CG	UNK	P	CG	
97/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
97/04	ECAR		UN	CG&E	New GT 3	65	GT	NG	P	U	
97/04	ECAR		UN	CG&E	New GT 4	65	GT	NG	P	U	
97/04	ECAR		UN	CG&E	New GT 5	65	GT	NG	P	U	
97/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
97/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
97/04	ERCOT		TX	TUEC	COMBUSTION TURBINE	375	CT	NG	P	U	
97/04	ERCOT		TX	TUEC	UNSPECIFIED	150[f]	UN	UNK	P	U	
97/04	WSCC	RMP	CO	CCS	NIXON CT 1	54	GT	NG	P	U	
97/05	MAAC		UN	GPUS	Combined Cycle	100	CW	NG	P	U	
97/05	MAAC		UN	GPUS	Combustion Turbines	100	GT	NG	P	U	
97/05	MAAC		UN	GPUS	Combustion Turbines	200	CT	FO2	P	U	
97/05	MAIN	EM	MO	UE	COMBUSTION TURBINE	75	GT	FO2	P	U	
97/05	MAPP		UN	ISU	FUTURE GT 2	50	GT	NG	P	U	
97/05	MAPP		UN	NSP	FUTURE PEAKER 2	100	UN	UNK	P	U	
97/05	SERC	SOU	AL	ALAP	PEAKING	252	GT	GAS	P	U	
97/05	SERC	SOU	GA	GEPC	PEAKING	630	GT	GAS	P	U	
97/05	SERC	SOU	GA	GEPC	PEAKING	95	GT	GAS	P	U	J
97/05	SERC	SOU	GA	SAEP	PEAKING	31	GT	GAS	P	U	J
97/05	SERC	VAC	UN	UNK	UNDESIGNATED	300	UN	UNK	P	U	
97/05	SPP	N	MO	MIPU	PLANT X 2	100	ST	UNK	P	U	
97/06	ERCOT		TX	TNMP	TNP ONE UNIT 3	148	ST	LIG	T	U	
97/06	MAAC		MD	BCCO	Perryman 52	131	GT	NG	P	U	
97/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	225	GT	NG	P	U	
97/06	MAIN	WUM	WI	WPS	COGENERATION	54	ST	COL	P	CG	
97/06	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U	
97/06	NPCC	NY	NY	POAS	NIAGARA FALLS	330	HY	WAT	L	U	
97/06	SERC	SOU	MS	SOMI	MOSELLE	80	CT	NG	P	U	
97/06	SPP	N	MO	EMDE	ENERGY CENTER 4	75	CA	NG	P	U	
97/06	SPP	N	MO	SPRM	UNDETERMINED	50	ST	COL	P	U	

[a] See page 115, footnote a.

[b] Best combination of combustion turbines, load management, dispersed generation, and/or firm purchases.

[c] Capacity needed to meet HL&P's minimum reserve requirement.

[d] See page 127, footnote e.

[e] See page 115, footnote c.

[f] See page 126, footnote e.

Generating Unit Additions (Utility and Non-Utility)[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
97/06	WSCC	CNV	NV	NEVP	ALLEN 1	125	ST	BIT	P	U	
97/07	ECAR		KY	LG&E	Cane Run 12	75	GT	NG	P	U	
97/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
97/07	WSCC	NWP	OR	PGE	MISC. RESOURCES	30	ZZ	UNK	P	ZZ	
97/10	NPCC	NS	NS	NSPC	PT. ACONI 2	165	ST	BIT	P	U	
97/10	SERC	TVA	AL	TEVA	BELLEFONTE NO. 1	1212	NP	UR	V	U	
97/10	WSCC		AB	TAUC	NEW GENERATION	200	ZZ	UNK	P	U	
97/11	NPCC	NB	NB	NBPO	BELLEDUNE #1	440	ST	COL	P	U	
97/11	SERC	FL	FL	FLPC	Combined Cycle 1	182	CC	NG	P	U	
97/12	NPCC	QUE	QB	HYQB	MANIC 2 A 1-2	363	HY	WAT	P	U	
SUBTOTAL						8980					
98/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
98/01	ECAR		UN	EKPC	Unknown	60[b]	UN	UNK	P	U	
98/01	ERCOT		TX	BEPC	UNDESIGNATED	104	GT	NG	P	U	
98/01	ERCOT		TX	HL&P	ADDITIONAL CAPACITY NEED	200[c]	UN	UNK	P	U	
98/01	MAAC		NJ	AECO	SCMUA - NUG 1	6[d]	ZZ	REF	P	ZZ	
98/01	MAPP		MN	SMMP	FUTURE COMB CYCLE 1	80	CT	NG	P	U	
98/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	543[e]	ZZ	UNK	P	U	
98/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	80[f]	ZZ	UNK	P	ZZ	
98/01	SERC	FL	FL	FLPL	Integrated Coal Unit 2	768	IG	BIT	P	U	
98/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY EXP. 03	15	UN	REF	P	ZZ	
98/01	SERC	FL	FL	FLPL	SUGAR MILL 01	0	UN	ZZ	P	ZZ	
98/01	SERC	FL	FL	LALW	Unknown 2	50	GT	NG	P	U	
98/01	SERC	FL	FL	TAEC	Heat Recovery Steam Generator	61.8	CW	WH	P	U	
98/01	SERC	SOU	AL	ALEC	CT 1	75	GT	NG	P	U	
98/01	SERC	SOU	AL	ALEC	CT 2	75	GT	NG	P	U	
98/01	SERC	SOU	AL	ALEC	FOSSIL 1	125	ST	LIG	P	U	
98/01	WSCC	AZN	AZ	APS	GENERIC COGEN 3	4	CG	UNK	P	CG	
98/01	WSCC	AZN	AZ	APS	REFUSE 1	10	ZZ	REF	L	ZZ	
98/01	WSCC	AZN	AZ	APS	SOLAR 2	8	SO	SUN	P	U	
98/01	WSCC	AZN	TX	EPE	GENERIC STATION #2	70	GT	NG	P	U	
98/01	WSCC	CNV	CA	LDWP	GENERIC 1998	200	ZZ	UNK	P	U	
98/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG	
98/01	WSCC	CNV	CA	NCPA	UNID. GENERIC BASE	25	ZZ	UNK	P	U	
98/01	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 98	17	HY	WAT	P	U	
98/01	WSCC	CNV	CA	PG&E	UNID. PG&E SMALL HYDRO 98	2	HY	WAT	P	U	
98/03	SERC	VAC	UN	CAPO	UNDESIGNATED	500	UN	UNK	P	U	
98/03	SPP	N	MO	KACP	COMB. TURBINE [illegible]	105	GT	NG	P	U	
98/04	ECAR		UN	CG&E	New Comb. Cycle 1	187	CT	NG	P	U	
98/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
98/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
98/04	ERCOT		TX	TUEC	FOREST GROVE # 1	750	ST	LIG	U	U	
98/04	WSCC	RMP	CO	PSC	PAWNEE 2	485	ST	BIT	P	U	
98/05	ERCOT		TX	CPSA	GT98 #1	70	CT	NG	U	U	
98/05	ERCOT		TX	CPSA	GT98 #2	70	CT	NG	P	U	
98/05	MAAC		MD	PPCO	CC Component 4	127	CT	NG	L	U	
98/05	MAAC		UN	DPLC	Unidentified COAL	150	ST	BIT	P	U	
98/05	MAAC		UN	GPUS	Combined Cycle	100	CW	NG	P	U	
98/05	MAAC		UN	GPUS	Combustion Turbines	300	GT	NG	P	U	

[a] See page 115, footnote a.

[b] Best combination of combustion turbines, load management, dispersed generation, and/or firm purchases.

[c] Capacity needed to meet HL&P's minimum reserve requirement.

[d] Incinerator with steam turbine.

[e] See page 127, footnote e.

[f] See page 115, footnote c.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
98/05	MAIN	EM	MO	UE	COMBUSTION TURBINE	75	GT	FO2	P	U	
98/05	MAPP		UN	NSP	FUTURE BASE 1	400	UN	UNK	P	U	
98/05	SERC	SOU	FL	GUPC	PEAKING	126	GT	GAS	[illegible]	U	
98/05	SERC	SOU	GA	GEPC	PEAKING	630	GT	GAS	P	U	
98/05	SERC	SOU	GA	GEPC	PEAKING	94	GT	GAS	P	U	J
98/05	SERC	SOU	GA	SAEP	PEAKING	32	GT	GAS	P	U	J
98/05	SERC	VAC	UN	UNK	UNDESIGNATED	300	UN	UNK	P	U	
98/05	SPP	WC	OK	OKGE	COGENERATOR - MCPC	100	GT	NG	P	CG	
98/06	ERCOT		TX	HL&P	AES DEEPWATER-NUG	-136[b]	ST	PC	P	ZZ	
98/06	ERCOT		TX	TNMP	TNP ONE UNIT 4	148	ST	LIG	T	U	
98/06	MAAC		MD	BCCO	Perryman 61	131	GT	NG	P	U	
98/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	75	GT	NG	P	U	
98/06	MAIN	WUM	WI	WPS	COGENERATION	44	ST	COL	P	CG	
98/06	MAIN	WUM	WI	WPS	HYDRO	4	HY	WAT	P	U	
98/06	SERC	FL	FL	GAMW	Unknown 1	35	GT	NG	P	U	
98/06	SERC	SOU	MS	SOMI	MOSELLE	40	CW	WH	P	U	
98/06	SERC	VAC	SC	SOCA	UNDESIGNATED	80	GT	FO2	P	U	
98/06	SPP	N	MO	EMDE	UNKNOWN 98	32	GT	NG	P	U	
98/06	SPP	WC	OK	OMPA	UNKNOWN	35	GT	NG	P	U	
98/06	WSCC	AZN	AZ	APS	GENERIC CT 1-3	210	GT	NG	P	U	
98/06	WSCC	CNV	NV	NEVP	ALLEN 2	125	ST	BIT	P	U	
98/06	WSCC	NWP	WA	TCL	HOWARD HANSON 1-3	0	HY	WAT	P	U	
98/07	WSCC	CNV	CA	RDNG	LAKE REDDING	8	HY	WAT	L	U	
98/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
98/10	SERC	TVA	UN	TEVA	UNDETERMINED X4	300	UN	UNK	P	U	
98/10	WSCC		AB	TAUC	NEW GENERATION	200	ZZ	UNK	P	U	
98/11	NPCC	ONT	ON	ONHY	NIAGARA RIVER 1-2	550	HY	WAT	P	U	
98/11	SERC	FL	FL	FLPC	Combustion Turbine 4-5	240	GT	FO2	P	U	
98/12	ERCOT		TX	HL&P	MALAKOFF #2	645	ST	LIG	T	U	
98/12	ERCOT		TX	WETU	RIO PECOS #6	33	CT	NG	P	U	
98/12	MAIN	WUM	WI	MPU	MANITOWOC 8	60	ST	BIT	P	U	
98/12	NPCC	QUE	QB	HYQB	Gr.BALEINE GB-1 1-3	1177	HY	WAT	P	U	
98/UN	MAIN	SCI	IL	CIL	COMBUSTION TURBINE	80	CT	NG	P	U	
SUBTOTAL						11518					
99/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
99/01	ECAR		MI	DECO	Unknown	150	UN	UNK	P	U	
99/01	ERCOT		TX	HL&P	ADDITIONAL CAPACITY NEED	200[c]	UN	UNK	P	U	
99/01	ERCOT		TX	TMPA	UNDESIGNATED	100	GT	NG	P[f]	U	
99/01	NPCC	NE	ME	BHE	BASIN MILLS	27	HY	WAT	P	U	
99/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	672[d]	ZZ	UNK	P	U	
99/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	86[e]	ZZ	UNK	P	ZZ	
99/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 13 (UNK)	0	CG	NG	P	CG	
99/01	SERC	FL	FL	TAEC	CT #3	67.1	GT	FO2	P	U	
99/01	SERC	SOU	AL	ALEC	CT 3	75	GT	NG	P	U	
99/01	WSCC	AZN	AZ	APS	GENERIC COGEN 4	4	CG	UNK	P	CG	
99/01	WSCC	CNV	CA	LDWP	GENERIC 1999	100	ZZ	UNK	P	U	
99/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	3	CG	UNK	P	CG	
99/01	WSCC	CNV	CA	SDGE	COMBINED CYCLE 3	132	CT	NG	P	U	
99/01	WSCC	CNV	CA	SDGE	COMBINED CYCLE 3	92	CW	WH	P	U	

[a] See page 115, footnote a.

[b] Contract for firm purchase power expires.

[c] Capacity needed to meet HL&P's minimum reserve requirement.

[d] See page 127, footnote e.

[e] See page 115, footnote c.

Generating Unit Additions (Utility and Non-Utility)[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
99/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
99/03	SPP	N	MO	KACP	IATAN 2	250	ST	SUB	P	U	J
99/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
99/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
99/04	ERCOT		TX	TUEC	UNSPECIFIED	300[b]	UN	UNK	P	U	
99/04	ERCOT		TX	TUEC	UNSPECIFIED	650[b]	UN	UNK	P	U	
99/04	MAIN	CE	IL	CECO	RESTORE PEAKERS	40	JE	JF	P	U	
99/04	MAIN	CE	UN	CECO	COMBUSTION TURBINE	400	CT	UNK	P	U	
99/05	ERCOT		TX	CPSA	GT99 #1	70	CT	NG	P	U	
99/05	ERCOT		TX	CPSA	GT99 #2	70	CT	NG	P	U	
99/05	ERCOT		TX	CPSA	GT99 #3	70	CT	NG	P	U	
99/05	MAAC		MD	DPLC	Easton Unidentified	20	IC	FO2	P	U	
99/05	MAAC		UN	GPUS	Combined Cycle	100	CW	NG	P	U	
99/05	MAAC		UN	GPUS	Combustion Turbines	300	GT	NG	P	U	
99/05	MAAC		UN	PSCO	Combined Cycle 1	400	CC	NG	P	U	
99/05	MAIN	EM	MO	UE	COMBUSTION TURBINE	75	GT	FO2	P	U	
99/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	P	U	
99/05	MAPP		NE	OPPD	FUTURE GT 2	80	GT	FO2	P	U	
99/05	SERC	SOU	AL	ALAP	PEAKING	126	GT	GAS	P	U	
99/05	SERC	SOU	GA	GEPC	PEAKING	630	GT	GAS	P	U	
99/05	SERC	SOU	MS	MIPR	PEAKING	126	GT	GAS	P	U	
99/05	SPP	WC	OK	OKGE	UNKNOWN 99	170	GT	NG	P	U	
99/06	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-415[c]	UN	UNK	P	ZZ	
99/06	MAAC		MD	BCCO	Perryman 62	131	GT	NG	P	U	
99/06	MAIN	SCI	IL	CWLP	LAKESIDE 5	20	CA	NG	P	U	
99/06	MAIN	SCI	IL	CWLP	LAKESIDE GT2	36[d]	CT	NG	P	U	
99/06	MAIN	WUM	WI	MGE	COMBUSTION TURBINE	36	UN	NG	P	U	
99/06	MAIN	WUM	WI	WEP	COMBINED CYCLE	70	CC	NG	P	U	
99/06	MAIN	WUM	WI	WPS	COGENERATION	27	ST	COL	P	CG	
99/06	SERC	FL	FL	GAMW	Unknown 2	35	GT	NG	P	U	
99/06	SPP	N	MO	EMDE	UNKNOWN 99	32	GT	NG	P	U	
99/06	SPP	SE	AR	AREC	COMBUSTION TURBINE	100	CT	NG	P	U	
99/06	WSCC	AZN	AZ	APS	GENERIC CT 4-5	140	GT	NG	P	U	
99/06	WSCC	CNV	NV	NEVP	ALLEN 3	125	ST	BIT	P	U	
99/07	ERCOT		TX	LCRA	UNSPECIFIED	127	GT	NG	P	U	
99/07	WSCC	CNV	CA	RDNG	LAKE RED BLUFF	4	HY	WAT	L	U	
99/09	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-74[c]	UN	UNK	P	ZZ	
99/10	NPCC	NS	NS	NSPC	PT. ACONI 3	165	ST	BIT	P	U	
99/10	SERC	TVA	AL	TEVA	BELLEFONTE NO. 2	1212	NP	UR	V	U	
99/10	WSCC		AB	TAUC	NEW GENERATION	300	ZZ	UNK	P	U	
99/11	SERC	FL	FL	FLPC	Combined Cycle 2	182	CC	NG	P	U	
99/12	ERCOT		TX	WETU	COMBUSTION TURBINE #1	135	GT	NG	P	U	
99/12	NPCC	QUE	QB	HYQB	Gr.BALEINE GB-1 4-5	785	HY	WAT	P	U	
99/12	WSCC	NWP	WA	BPA	WNP 1[e]	0[f]	NP	UR	V	U	
99/12	WSCC	NWP	WA	BPA	WNP 3[e]	0[f]	NP	UR	V	U	
SUBTOTAL						9348					
Under Review[g]	ECAR		OH	CEC	Perry 2	1182[f]	NB	UR	V	U	J
TOTAL						110182[h]	(109000)[f,h]				

[a] See page 115, footnote a.

[b] See page [illegible], footnote e.

[c] Contract for firm purchase power expires.

[d] Part of CWLP's coal gasification/combined cycle demonstration plant.

[e] Construction suspended on WNP 1 and WNP 3. Designated as a 2490 MW 'secured option.'

[f] WNP 1, WNP 3, and Perry 2 nuclear units were not counted as part of the owning utilities' or NERC's capacity during the ten-year forecast period. The units are listed here for information only.

[g] Construction activity on Perry 2 has been suspended. Options with respect to the completion and timing of Perry 2 are being evaluated. A decision regarding the completion of the unit is not exp[illegible] until all options have been evaluated.

[h] Includes 114 MW of unit additions in ASC[illegible] Affiliate member.

Coal-Fired Generating Unit Additions[a]
(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/06	ERCOT		TX	TNMP	TNP ONE UNIT 1	148	ST	LIG	V	U	
90/06	WSCC	AZN	AZ	TEP	SPRINGERVILLE 2	360	ST	SUB	V	U	
90/10	WSCC		AB	TAUC	SHEERNESS 2	383	ST	SUB	V	U	J
SUBTOTAL						891					
91/01	ECAR		KY	LG&E	Trimble County 1	495[b]	ST	COL	V	U	
91/04	MAIN	WUM	WI	MPU	MANITOWOC 5	25	ST	BIT	P	U	
91/05	MAIN	WUM	WI	MPU	BOILER ADDITION	13	ST	BIT	U	U	
91/05	SERC	SOU	AL	ALAP	MILLER 4	667	ST	BIT	U	U	
91/06	ECAR		OH	CG&E	W.H. Zimmer 1	1300[c]	ST	COL	V	U	J
91/06	ERCOT		TX	TNMP	TNP ONE UNIT 2	148	ST	LIG	U	U	
91/06	MAAC		MD	BCCO	Brandon Shores 2	640	ST	BIT	V	U	
91/10	NPCC	NS	NS	NSPC	TRENTON 6	150	ST	BIT	U	U	
91/10	WSCC		AB	EDMP	GENESEE 1	406	ST	SUB	V	U	
SUBTOTAL						3844					
92/05	ERCOT		TX	CPSA	J. K. SPRUCE #1	498	ST	COL	V	U	
92/07	MAPP		SA	SPC	SHAND 1	280	ST	LIG	V	U	
SUBTOTAL						778					
93/10	NPCC	NS	NS	NSPC	PT. ACONI 1	165	ST	BIT	U	U	
93/11	NPCC	NB	NB	NBPO	BELLEDUNE #2	440	ST	COL	U	U	
93/12	SERC	VAC	VA	VIEP	Clover 1	196	ST	COL	T	U	J
SUBTOTAL						801					
94/06	MAIN	SCI	IL	CWLP	LAKESIDE 4	20[d]	CA	COL	P	U	
94/11	NPCC	NB	NB	NBPO	GRAND LAKE #9	170[e]	ST	COL	P	U	
94/12	SERC	VAC	VA	VIEP	Clover 2	196	ST	COL	T	U	J
SUBTOTAL						386					
95/04	ERCOT		TX	TUEC	TWIN OAK # 1	750	ST	LIG	U	U	
95/06	SERC	VAC	SC	SOCA	CROSS STEAM UNIT #1	520	ST	BIT	P	U	
SUBTOTAL						1270					
96/01	ERCOT		TX	ST&M	SAN MIGUEL #2	200	ST	LIG	P	U	J
96/01	SERC	FL	FL	FLPL	Integrated Coal Unit 1	768	IG	BIT	P	U	
96/04	ERCOT		TX	TUEC	TWIN OAK # 2	750	ST	LIG	U	U	
96/05	SERC	VAC	SC	SOCG	UNDETERMINED 5	375	ST	COL	P	U	
96/09	ECAR		WV	AEP	Philip Sporn 3-4 PFBC	320	PB	COL	P	U	
96/10	MAPP		SA	SPC	FUTURE FOSSIL 1	273	ST	LIG	P	U	
96/12	ERCOT		TX	HL&P	MALAKOFF #1	645	ST	LIG	T	U	
SUBTOTAL						3331					
97/01	SERC	FL	FL	KISM	Unknown	20	ST	BIT	P	U	
97/01	SERC	FL	FL	ORLA	Stanton Energy Center 2	440	ST	BIT	P	U	
97/06	ERCOT		TX	TNMP	TNP ONE UNIT 3	148	ST	LIG	T	U	
97/06	SPP	N	MO	SPRM	UNDETERMINED	50	ST	COL	P	U	
97/06	WSCC	CNV	NV	NEVP	ALLEN 1	125	ST	BIT	P	U	
97/10	NPCC	NS	NS	NSPC	PT. ACONI 2	165	ST	BIT	P	U	
97/11	NPCC	NB	NB	NBPO	BELLEDUNE #1	440	ST	COL	P	U	
SUBTOTAL						1388					

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] 371 MW to be retained by LG&E, the remainder will be sold.

[c] The owners of this plant, which has been under construction as a nuclear unit, announced on January 21, 1984 that the plant design will be converted from nuclear to coal-fired.

[d] Part of CWLP's coal gasification/combined cycle demonstration plant.

[e] Final sizing of this unit is undecided.

Coal-Fired Generating Unit Additions[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
98/01	SERC	FL	FL	FLPL	Integrated Coal Unit 2	768	IG	BIT	P	U	
98/01	SERC	SOU	AL	ALEC	FOSSIL 1	125	ST	LIG	P	U	
98/04	ERCOT		TX	TUEC	FOREST GROVE # 1	750	ST	LIG	U	U	
98/04	WSCC	RMP	CO	PSC	PAWNEE 2	485	ST	BIT	P	U	
98/05	MAAC		UN	DPLC	Unidentified COAL	150	ST	BIT	P	U	
98/06	ERCOT		TX	TNMP	TNP ONE UNIT 4	148	ST	LIG	T	U	
98/06	WSCC	CNV	NV	NEVP	ALLEN 2	125	ST	BIT	P	U	
98/12	ERCOT		TX	HL&P	MALAKOFF #2	645	ST	LIG	T	U	
98/12	MAIN	WUM	WI	MPU	MANITOWOC 8	60	ST	BIT	P	U	
SUBTOTAL						3256					
99/03	SPP	N	MO	KACP	IATAN 2	250	ST	SUB	P	U	J
99/06	WSCC	CNV	NV	NEVP	ALLEN 3	125	ST	BIT	P	U	
99/10	NPCC	NS	NS	NSPC	PT. ACONI 3	165	ST	BIT	P	U	
SUBTOTAL						540					
TOTAL						16485					

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

Nuclear Generating Unit Additions[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/01	MAAC		PA	PECO	Limerick 2	1055	NB	UR	V	U	
90/03	NPCC	ONT	ON	ONHY	DARLINGTON 2	881	CD	UR	V	U	
90/04	ERCOT		TX	TUEC	COMANCHE PEAK # 1	1150	NP	UR	V	U	
90/06	NPCC	NE	NH	PSNH	SEABROOK 1	1150[b]	NP	UR	V	U	
90/12	NPCC	ONT	ON	ONHY	DARLINGTON 1	881	CD	UR	V	U	
SUBTOTAL						5117					
91/10	SERC	TVA	TN	TEVA	WATTS BAR NO. 1	1170	NP	UR	V	U	
91/12	NPCC	ONT	ON	ONHY	DARLINGTON 3	881	CD	UR	V	U	
SUBTOTAL						2051					
92/04	ERCOT		TX	TUEC	COMANCHE PEAK # 2	1150	NP	UR	V	U	
92/12	NPCC	ONT	ON	ONHY	DARLINGTON 4	881	CD	UR	U	U	
SUBTOTAL						2031					
94/10	SERC	TVA	TN	TEVA	WATTS BAR NO. 2	1170	NP	UR	V	U	
SUBTOTAL						1170					
97/10	SERC	TVA	AL	TEVA	BELLEFONTE NO. 1	1212	NP	UR	V	U	
SUBTOTAL						1212					
99/10	SERC	TVA	AL	TEVA	BELLEFONTE NO. 2	1212	NP	UR	V	U	
99/12	WSCC	NWP	WA	BPA	WNP 1[c]	0[d]	NP	UR	V	U	
99/12	WSCC	NWP	WA	BPA	WNP 3[c]	0[d]	NP	UR	V	U	
SUBTOTAL						1212					
Under Review[e]	ECAR		OH	CEC	Perry 2	1182[d]	NB	UR	V	U	J
TOTAL						13975	(12793)[d]				

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] PSNH is unable to predict when the Seabrook plant will be permitted to commence operation. However, for planning and reporting purposes, NEPLAN is assuming commercial operation by Jan. 1, 1990.

[c] Construction suspended on WNP 1 and WNP 3. Designated as a 2490 MW 'secured option.'

[d] WNP 1, WNP 3, and Perry 2 nuclear units were not counted as part of the owning utilities' or NERC's capacity during the ten-year forecast period. The units are listed here for information only.

[e] Construction activity on Perry 2 has been suspended. Options with respect to the completion and timing of Perry 2 are being evaluated. A decision regarding the completion of the unit is not expected until all options have been evaluated.

Hydro (Conventional) Generating Unit Additions[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/01	WSCC	CNV	CA	NCPA	HYDROELEC. PROJ NO. ONE	200	HY	WAT	V	U	J
90/03	NPCC	QUE	QB	HYQB	MANIC 5 P.A. 3	264	HY	WAT	V	U	
90/03	NPCC	QUE	QB	HYQB	MANIC 5 P.A. 4	264	HY	WAT	V	U	
90/04	NPCC	NE	VT	VTGP	HIGHGATE FALLS	3.1	HY	WAT	V	U	
90/04	WSCC	AZN	NM	LAC	ABIQUIU 1	7	HY	WAT	V	U	
90/04	WSCC	AZN	NM	LAC	ABIQUIU 2	7	HY	WAT	V	U	
90/05	WSCC	NWP	UT	UAMP	PINEVIEW	2	HY	WAT	U	U	
90/07	NPCC	NY	NY	POAS	PASNY NEW HYDRO	12	HY	WAT	V	U	
90/09	NPCC	NE	ME	CMP	MONTY	25	HY	WAT	U	U	
SUBTOTAL						784					
91/02	MAPP		MB	MHEB	LIMESTONE 3	120	HY	WAT	U	U	
91/03	WSCC	RMP	WY	USGP	SHOSHONE	21	HY	WAT	V	U	
91/04	MAPP		MB	MHEB	LIMESTONE 4	120	HY	WAT	U	U	
91/05	ECAR		OH	HAMI	Hydro	5	HY	WAT	P	U	
91/07	MAPP		MB	MHEB	LIMESTONE 5	120	HY	WAT	U	U	
91/07	WSCC	NWP	UT	UAMP	EAST CANYON 1 & 2	2	HY	WAT	L	U	
91/07	WSCC	NWP	UT	UAMP	LOST CREEK	1	HY	WAT	T	U	
91/09	ASCC		AK	AEA	BRADLEY LAKE	108	HY	WAT	V	U	
91/10	MAPP		MB	MHEB	LIMESTONE 6	120	HY	WAT	U	U	
91/10	NPCC	QUE	QB	HYQB	LG 2A P.A. 1	316	HY	WAT	V	U	
91/10	WSCC	AZN	AZ	USLC	HEADGATE (3)	22	HY	WAT	U	U	
91/10	WSCC	RMP	CO	USUC	MCPHEE POWER PLANT	1	HY	WAT	V	U	
91/11	NPCC	NE	VT	VTGP	NEWPORT 1	0.2	HY	WAT	P	U	
91/11	NPCC	QUE	QB	HYQB	LG 2A P.A. 2	316	HY	WAT	V	U	
91/12	MAPP		MB	MHEB	LIMESTONE 7	120	HY	WAT	U	U	
91/12	NPCC	QUE	QB	HYQB	HART JAUNE 1-2-3	48	HY	WAT	U	U	
91/12	NPCC	QUE	QB	HYQB	LG 2A P.A. 3	316	HY	WAT	V	U	
SUBTOTAL						1756					
92/01	WSCC	CNV	CA	CDWR	DEVIL CANYON 3	80	HY	WAT	U	U	
92/01	WSCC	CNV	CA	CDWR	DEVIL CANYON 4	80	HY	WAT	U	U	
92/05	MAPP		MB	MHEB	LIMESTONE 8	120	HY	WAT	U	U	
92/05	SERC	VAC	GA	SOCG	STEVENS CREEK	11	HY	WAT	P	U	
92/05	SERC	VAC	SC	SOCG	PARR SHOALS	17	HY	WAT	P	U	
92/05	WSCC	NWP	WA	PSPL	WHITE RIVER FLUME	14	HY	WAT	L	U	
92/06	NPCC	QUE	QB	HYQB	LG 2A P.A. 4	316	HY	WAT	V	U	
92/07	WSCC	NWP	ID	USPN	MINIDOKA 1-5	12	HY	WAT	P	U	
92/07	WSCC	RMP	CO	USUC	TOWAOC	11	HY	WAT	T	U	
92/08	MAPP		MB	MHEB	LIMESTONE 9	120	HY	WAT	U	U	
92/09	NPCC	QUE	QB	HYQB	LG 2A P.A. 5	316	HY	WAT	V	U	
92/09	WSCC	RMP	CO	USUC	RIDGEWAY POWER PLANT	4	HY	WAT	T	U	
92/10	WSCC	NWP	ID	IPC	MILNER HYDRO	0	HY	WAT	U	U	
92/11	MAPP		MB	MHEB	LIMESTONE 10	120	HY	WAT	U	U	
92/11	NPCC	NE	VT	VTGP	FAIRFAX FALLS	2.8	HY	WAT	P	U	
92/12	NPCC	NE	MA	NEES	RP VERNON	20	HY	WAT	L	U	
92/12	NPCC	QUE	QB	HYQB	LG 2A P.A. 6	316	HY	WAT	V	U	
SUBTOTAL						1560					
93/01	NPCC	NE	ME	BHE	MILFORD	1.7	HY	WAT	P	U	

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

Hydro (Conventional) Generating Unit Additions[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
93/01	NPCC	ONT	ON	ONHY	LAKE GIBSON 1-2	5	HY	WAT	P	U	
93/01	WSCC	NWP	ID	IPC	SWAN FALLS REBUILD	5	HY	WAT	L	U	
93/01	WSCC	NWP	WA	TCL	WYNOCHEE 1	0	HY	WAT	T	U	
93/06	MAIN	WUM	WI	WEP	HYDRO	3	HY	WAT	P	U	
93/06	NPCC	NE	MA	NEES	RP BELLOWS FALLS	6	HY	WAT	P	U	
93/06	NPCC	NY	NY	NIMP	SOUTH GLENS FALLS	13.8	HY	WAT	P	U	
93/12	NPCC	QUE	QB	HYQB	BRISAY 1-2	460	HY	WAT	U	U	
93/12	WSCC	NWP	WA	PSPL	THUNDER CREEK	6	HY	WAT	L	U	
SUBTOTAL						501					
94/01	NPCC	NY	NY	NIMP	OSWEGO FALLS WEST	5.5	HY	WAT	P	U	
94/01	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 94	20	HY	WAT	L	U	
94/01	WSCC	NWP	WA	TCL	RUTH CREEK	0	HY	WAT	T	U	
94/01	WSCC	NWP	WA	TCL	SWAMP CREEK	0	HY	WAT	T	U	
94/03	SPP	SE	AR	AREC	HS 9 UNIT #1	6	HY	WAT	T	U	
94/03	SPP	SE	AR	AREC	HS 9 UNIT #2	6	HY	WAT	T	U	
94/03	SPP	SE	AR	AREC	HS 9 UNIT #3	5	HY	WAT	T	U	
94/06	WSCC	NWP	WA	TCL	BARRIER 1-2	0	HY	WAT	L	U	
94/07	NPCC	NY	NY	NIMP	HUDSON FALLS	36.1	HY	WAT	L	U	
94/09	WSCC	NWP	WA	PSPL	NOISY CREEK	10	HY	WAT	L	U	
94/09	WSCC	NWP	WA	PSPL	SWIFT CREEK	9	HY	WAT	L	U	
94/09	WSCC	NWP	WA	SCL	SOUTH FORK TOLT	15	HY	WAT	T	U	
94/10	MAPP		SA	SPC	FUTURE HYDRO I	35	HY	WAT	P	U	
94/10	NPCC	ONT	ON	ONHY	KIPLING EXTN. 1	66	HY	WAT	P	U	
94/10	WSCC	NWP	WA	PSPL	NOOKSACK FALLS	8	HY	WAT	L	U	
94/12	NPCC	QUE	QB	HYQB	LA GRANDE 1-6	684	HY	WAT	U	U	
94/12	NPCC	QUE	QB	HYQB	LAFORGE 1 1-6	829	HY	WAT	U	U	
SUBTOTAL						1735					
95/01	WSCC	CNV	CA	CDWR	MOJAVE SIPHON	32	HY	WAT	P	U	
95/01	WSCC	NWP	ID	IPC	TWIN FALLS EXPANSION	5	HY	WAT	L	U	
95/04	NPCC	ONT	ON	ONHY	SMOKEY FALLS EXTN. 1-2	182	HY	WAT	P	U	
95/06	SPP	WC	OK	GRRD	FT. GIBSON 5 & 6	25	HY	WAT	P	U	
95/09	WSCC	NWP	WA	TCL	ELKHORN 1-2	0	HY	WAT	L	U	
95/11	NPCC	ONT	ON	ONHY	HARMON EXTN. 1	74	HY	WAT	P	U	
95/12	NPCC	QUE	QB	HYQB	LA GRANDE 7-12	684	HY	WAT	U	U	
95/12	NPCC	QUE	QB	HYQB	LAFORGE 2 1-2	270	HY	WAT	P	U	
SUBTOTAL						1272					
96/01	NPCC	NE	ME	BHE	VEAZIE	5	HY	WAT	P	U	
96/01	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 96	1	HY	WAT	P	U	
96/01	WSCC	NWP	WA	TCL	GLACIER CREEK	0	HY	WAT	L	U	
96/01	WSCC	NWP	WA	TCL	WELLS CREEK	0	HY	WAT	L	U	
96/05	NPCC	ONT	ON	ONHY	LITTLE LONG EXTN. 1	51	HY	WAT	P	U	
96/11	NPCC	NE	VT	VTGP	NEWPORT 2	3.2	HY	WAT	P	U	
96/11	NPCC	ONT	ON	ONHY	LITTLE JACKFISH 1-2	129	HY	WAT	P	U	
96/12	NPCC	QUE	QB	HYQB	EASTMAIN 1 1-3	465	HY	WAT	P	U	
96/12	NPCC	QUE	QB	HYQB	MANIC 3 A 1-2	620	HY	WAT	P	U	
SUBTOTAL						1274					

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

Hydro (Conventional) Generating Unit Additions[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
97/01	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 97	109	HY	WAT	P	U	
97/06	NPCC	NY	NY	POAS	NIAGARA FALLS	330	HY	WAT	L	U	
97/12	NPCC	QUE	QB	HYQB	MANIC 2 A 1-2	363	HY	WAT	P	U	
SUBTOTAL						802					
98/01	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 98	17	HY	WAT	P	U	
98/01	WSCC	CNV	CA	PG&E	UNID. PG&E SMALL HYDRO 98	2	HY	WAT	P	U	
98/06	MAIN	WUM	WI	WPS	HYDRO	4	HY	WAT	P	U	
98/06	WSCC	NWP	WA	TCL	HOWARD HANSON 1-3	0	HY	WAT	P	U	
98/07	WSCC	CNV	CA	RDNG	LAKE REDDING	8	HY	WAT	L	U	
98/11	NPCC	ONT	ON	ONHY	NIAGARA RIVER 1-2	550	HY	WAT	P	U	
98/12	NPCC	QUE	QB	HYQB	Gr.BALEINE GB-1 1-3	1177	HY	WAT	P	U	
SUBTOTAL						1758					
99/01	NPCC	NE	ME	BHE	BASIN MILLS	27	HY	WAT	P	U	
99/07	WSCC	CNV	CA	RDNG	LAKE RED BLUFF	4	HY	WAT	L	U	
99/12	NPCC	QUE	QB	HYQB	Gr.BALEINE GB-1 4-5	785	HY	WAT	P	U	
SUBTOTAL						816					
TOTAL						12258[b]					

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] Includes a 108 MW hydro unit addition in ASCC, a NERC Affiliate member.

Oil-Fired Generating Unit Additions[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/05	SPP	N	MO	STJO	LAKE ROAD 7	21	JE	FO2	L	U	
90/06	SERC	VAC	VA	VIEP	Darbytown 1	79	GT	FO2	U	U	
90/06	SERC	VAC	VA	VIEP	Darbytown 2	79	GT	FO2	U	U	
90/06	SERC	VAC	VA	VIEP	Darbytown 3	79	GT	FO2	U	U	
90/06	SERC	VAC	VA	VIEP	Darbytown 4	79	GT	FO2	U	U	
90/08	WSCC		MX	CFE	ROSARITO II #1	150	ST	FO6	V	U	
SUBTOTAL						487					
91/02	SERC	FL	FL	KEYW	Stock Island 1	9.8	IC	FO2	U	U	
91/02	SERC	FL	FL	KEYW	Stock Island 2	9.8	IC	FO2	U	U	
91/05	MAAC		DE	DPLC	Dover	35	GT	FO2	U	U	
91/05	MAPP		UN	NWPS	FUTURE CT 1	19.1	GT	FO2	L	U	
91/05	SPP	N	MO	MIPU	GREENWOOD 1	3	GT	FO2	L	U	
91/05	SPP	N	MO	MIPU	GREENWOOD 2	3	GT	FO2	L	U	
91/05	SPP	N	MO	MIPU	GREENWOOD 3	3	GT	FO2	L	U	
91/05	SPP	N	MO	MIPU	GREENWOOD 4	3	GT	FO2	L	U	
91/06	MAPP		IA	IPW	MASON CITY GT 1	30	GT	FO2	U	U	
91/06	MAPP		IA	IPW	MASON CITY GT 2	30	GT	FO2	U	U	
91/07	WSCC		MX	CFE	ROSARITO II #2	150	ST	FO6	V	U	
91/11	NPCC	NB	NB	NBPO	MILL BANK #1	84	GT	FO2	L	U	
91/11	NPCC	NB	NB	NBPO	MILL BANK #2	84	GT	FO2	L	U	
91/11	NPCC	NB	NB	NBPO	MILL BANK #3	84	GT	FO2	L	U	
91/11	NPCC	NB	NB	NBPO	MILL BANK #4	84	GT	FO2	L	U	
91/11	NPCC	NE	VT	VTGP	FLORENCE GT	9	GT	FO2	L	U	
SUBTOTAL						641					
92/05	MAPP		UN	NWPS	FUTURE CT 2	19.1	GT	FO2	P	U	
92/06	MAIN	WUM	WI	MARF	WILDWOOD 6-8	15	IC	FO2	P	U	
92/11	NPCC	NB	NB	NBPO	SIX ROADS #1	84	GT	FO2	P	U	
92/11	SERC	FL	FL	FLPC	Debary 7-10	280	GT	FO2	P	U	
92/12	NPCC	QUE	QB	HYQB	TAG	448	GT	FO2	P	U	
SUBTOTAL						846					
93/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
93/05	MAAC		MD	DPLC	Easton Unidentified	12.6	IC	FO2	P	U	
93/11	SERC	FL	FL	FLPC	Intercession City 7-10	280	GT	FO2	P	U	
93/12	NPCC	QUE	QB	HYQB	TAG	348	GT	FO2	P	U	
93/UN	ASCC		AK	SES	SEWARD 1	3	IC	FO2	P	U	
93/UN	ASCC		AK	SES	SEWARD 2	3	IC	FO2	P	U	
SUBTOTAL						777					
94/03	WSCC		MX	CFE	ENSENADA 1	150	ST	FO6	T	U	
94/06	SERC	VAC	NC	DUPC	LINCOLN COUNTY	216	GT	FO2	L	U	
94/06	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 1	70	GT	FO2	P	U	
SUBTOTAL						436					
95/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
95/05	MAPP		NE	OPPD	FUTURE GT 1	80	GT	FO2	P	U	
95/06	SERC	VAC	NC	DUPC	LINCOLN COUNTY	504	GT	FO2	L	U	
95/06	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 2	70	GT	FO2	P	U	

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

Oil-Fired Generating Unit Additions[a]
(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
95/10	NPCC	NS	NS	NSPC	NEW SITE B 1	100	GT	FO2	P	U	
95/11	SERC	FL	FL	FLPC	Combustion Turbine 1	120	GT	FO2	P	U	
SUBTOTAL						1004					
96/01	SERC	FL	FL	TAEC	CT #1	67.1	GT	FO2	P	U	
96/03	WSCC		MX	CFE	ENSENADA 2	150	ST	FO6	P	U	
96/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
96/05	MAAC		MD	DPLC	Easton Unidentified	15	IC	FO2	P	U	
96/05	MAPP		IA	IPR	PLEASANT HILL 3	35	GT	FO2	P	U	
96/05	MAPP		IA	IPR	PLEASANT HILL 4	35	GT	FO2	P	U	
96/06	SERC	VAC	NC	DUPC	LINCOLN COUNTY	432	GT	FO2	L	U	
96/06	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 3	70	GT	FO2	P	U	
96/06	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 4	70	GT	FO2	P	U	
96/11	SERC	FL	FL	FLPC	Combustion Turbine 2-3	240	GT	FO2	P	U	
96/12	NPCC	QUE	QB	HYQB	TAG	248	GT	FO2	P	U	
SUBTOTAL						1492					
97/01	SERC	FL	FL	TAEC	CT #2	67.1	GT	FO2	P	U	
97/05	MAAC		UN	GPUS	Combustion Turbines	200	CT	FO2	P	U	
97/05	MAIN	EM	MO	UE	COMBUSTION TURBINE	75	GT	FO2	P	U	
SUBTOTAL						342					
98/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
98/05	MAIN	EM	MO	UE	COMBUSTION TURBINE	75	GT	FO2	P	U	
98/06	SERC	VAC	SC	SOCA	UNDESIGNATED	80	GT	FO2	P	U	
98/11	SERC	FL	FL	FLPC	Combustion Turbine 4-5	240	GT	FO2	P	U	
SUBTOTAL						525					
99/01	SERC	FL	FL	TAEC	CT #3	67.1	GT	FO2	P	U	
99/04	ECAR		UN	KUC	Unknown	130	GT	FO2	P	U	
99/04	MAIN	CE	IL	CECO	RESTORE PEAKERS	40	JE	JF	P	U	
99/05	MAAC		MD	DPLC	Easton Unidentified	20	IC	FO2	P	U	
99/05	MAIN	EM	MO	UE	COMBUSTION TURBINE	75	GT	FO2	P	U	
99/05	MAPP		NE	OPPD	FUTURE GT 2	80	GT	FO2	P	U	
SUBTOTAL						412					
TOTAL						6962[b]					

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] Includes 6 MW of oil-fired unit additions in ASCC, a NERC affiliate member.

Gas-Fired Generating Unit Additions[a]
(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/03	ERCOT		TX	TUEC	DECORDOVA CT # 1	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	DECORDOVA CT # 2	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	DECORDOVA CT # 3	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	DECORDOVA CT # 4	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	PERMIAN BASIN CT #4	65	GT	NG	V	U	
90/03	ERCOT		TX	TUEC	PERMIAN BASIN CT #5	65	GT	NG	V	U	
90/05	MAAC		NJ	AECO	Cumberland 1	76	GT	NG	V	U	
90/05	SPP	SE	TX	LUPL	TECH 1	20	GT	NG	U	U	
90/05	SPP	WC	NM	SWPS	MADDOX 3 GT	10	GT	GAS	V	U	
90/06	MAAC		MD	PPCO	SMECO CT	84	GT	NG	L	U	
90/06	MAIN	WUM	WI	WPS	LANDFILL GAS	3	ST	GAS	P	U	
90/06	SERC	VAC	VA	VIEP	Chesterfield 7	137	CT	NG	U	U	
90/11	NPCC	NE	MA	PMLP	WATERS RIVER 2	28.5	JE	NG	L	U	
90/12	NPCC	NE	MA	OSP	OCEAN STATE POWER 1	225	CC	NG	U	U	
SUBTOTAL						973					
91/01	SERC	FL	FL	HSTM	G. W. Ivey 22	24	IC	NG	P	U	
91/04	ECAR		IN	SIGE	A.B. Brown GT #1	80	GT	NG	U	U	
91/05	MAAC		DE	DPLC	Hay Road 3	105	CT	NG	L	U	
91/05	MAAC		NJ	AECO	Unassigned CT 1	78	GT	NG	L	U	
91/05	SERC	VAC	SC	SOCG	HAGOOD GT 1	93	GT	NG	T	U	
91/06	MAAC		MD	PPCO	Chalk Point 5	105	GT	NG	L	U	
91/06	MAAC		MD	PPCO	Chalk Point 6	105	GT	NG	L	U	
91/06	MAAC		MD	PPCO	Chalk Point Ct 3	86	GT	NG	L	U	
91/06	MAAC		MD	PPCO	Chalk Point Ct 4	86	GT	NG	L	U	
91/06	SERC	SOU	AL	ALEC	CAES 1[b]	110	ZZ	NG	U	U	
91/07	WSCC	CNV	CA	SCE	COOLWATER IGCC	75	CT	NG	V	U	
91/07	WSCC	CNV	CA	SCE	VERNON CT	40	GT	NG	U	U	
91/10	WSCC		BC	WKPL	GAS TURBINES 1-2	116	GT	NG	L	U	
91/11	NPCC	NE	MA	OSP	OCEAN STATE POWER 2	225	CC	NG	U	U	
SUBTOTAL						1328					
92/01	SERC	FL	FL	HSTM	G. W. Ivey 8	2.5	IC	NG	P	U	
92/01	SERC	FL	FL	HSTM	G. W. Ivey 9	2.5	IC	NG	P	U	
92/01	SERC	FL	FL	KISM	Unknown	32	GT	NG	L	U	
92/01	WSCC	CNV	CA	SMUD	CAMPBELL CG	49	CG	NG	P	U	
92/04	ECAR		OH	CG&E	Woodsdale 2	77	GT	NG	L	U	
92/04	ECAR		OH	CG&E	Woodsdale 3	77	GT	NG	L	U	
92/04	ECAR		OH	CG&E	Woodsdale 4	77	GT	NG	L	U	
92/04	ECAR		OH	CG&E	Woodsdale 5	78	GT	NG	L	U	
92/04	ECAR		OH	CG&E	Woodsdale 6	77	GT	NG	L	U	
92/05	SERC	VAC	SC	SOCG	UNDETERMINED 2	93	GT	NG	P	U	
92/05	SPP	N	MO	MIPU	RALPH GREEN 1	20	CW	NG	L	U	
92/06	MAAC		MD	PPCO	CC Component 1	127	CT	NG	L	U	
92/06	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U	
92/06	SERC	VAC	VA	VIEP	Chesterfield 8	141	CT	NG	U	U	
92/06	SPP	N	MO	SPRM	JRPS GT 2	71	GT	NG	P	U	
SUBTOTAL						999					
93/01	ERCOT		TX	BEPC	UNDESIGNATED	104	GT	NG	P	U	

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] Compressed air energy storage.

APPENDIX I Gas-Fired Generating Unit Additions

Gas-Fired Generating Unit Additions[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
93/04	ECAR		OH	CG&E	Woodsdale 1	77	GT	NG	L	U	
93/05	MAAC		MD	PPCO	CC Component 2	127	CT	NG	L	U	
93/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	L	U	
93/05	MAPP		UN	ISU	FUTURE GT 1	50	GT	NG	P	U	
93/06	MAIN	SCI	IL	CWLP	LAKESIDE GT1	36	CT	NG	P	U	
93/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U	
93/06	SERC	SOU	MS	SOMI	MOSELLE	80	CT	NG	P	U	
93/06	WSCC	CNV	NV	NEVP	CLARK 5	70	CT	NG	T	U	
93/06	WSCC	CNV	NV	NEVP	CLARK 6	70	CT	NG	T	U	
93/06	WSCC	CNV	NV	NEVP	CLARK 9	90	CW	NG	T	U	
93/10	MAPP		SA	SPC	FUTURE PEAKING 1	46	GT	NG	P	U	
93/10	SERC	FL	FL	JACO	NAS 1	50	CC	NG	P	U	
93/11	SERC	FL	FL	ORLA	Indian River CT C	77	GT	NG	P	U	
93/11	SERC	FL	FL	ORLA	Indian River CT D	77	GT	NG	P	U	
SUBTOTAL						1179					
94/01	ERCOT		TX	BEPC	UNDESIGNATED	103	GT	NG	P	U	
94/01	SERC	FL	FL	FLPL	Martin Combined Cycle 1	385	CC	NG	P	U	
94/01	SERC	FL	FL	LALW	Unknown 1	50	GT	NG	P	U	
94/01	SERC	SOU	AL	ALEC	MCWILLIAMS 4	100	CT	NG	P	U	
94/04	ECAR		OH	CG&E	Woodsdale 7	77	GT	NG	L	U	
94/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
94/05	MAAC		UN	GPUS	Combustion Turbines	200	GT	NG	P	U	
94/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	L	U	
94/05	SERC	SOU	GA	GEPC	PEAKING	40	GT	GAS	P	U	J
94/05	SERC	SOU	GA	GEPC	PEAKING	790	GT	GAS	P	U	
94/05	SERC	SOU	GA	SAEP	PEAKING	39	GT	GAS	P	U	J
94/05	SERC	SOU	GA	SAEP	PEAKING	79	GT	GAS	P	U	
94/05	SERC	VAC	SC	SOCG	UNDETERMINED 3	93	GT	NG	P	U	
94/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U	
94/06	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U	
94/06	WSCC	CNV	NV	NEVP	CLARK 10	90	CW	NG	T	U	
94/06	WSCC	CNV	NV	NEVP	CLARK 7	70	CT	NG	T	U	
94/06	WSCC	CNV	NV	NEVP	CLARK 8	70	CT	NG	T	U	
94/07	WSCC	RMP	SD	BHPL	CT 5	40	GT	NG	P	U	
94/UN	MAIN	SCI	IL	CIL	COMBUSTION TURBINE	80	CT	NG	P	U	
SUBTOTAL						2686					
95/01	ERCOT		TX	BEPC	UNDESIGNATED	300	CC	NG	P	U	
95/01	ERCOT		TX	HL&P	GAS TURBINE	80	GT	NG	P	U	
95/01	ERCOT		TX	HL&P	GAS TURBINE	80	GT	NG	P	U	
95/01	SERC	FL	FL	FLPL	Martin Combined Cycle 2	385	CC	NG	P	U	
95/01	WSCC	CNV	CA	LDWP	HARBOR CC	160	CT	NG	P	U	
95/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
95/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
95/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
95/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
95/05	MAAC		UN	GPUS	Combustion Turbines	600	CT	NG	P	U	
95/05	NPCC	NE	MA	NEES	RP MANCH 9,10,11	295[b]	ST	NG	L	U	
95/05	SERC	SOU	AL	ALAP	PEAKING	378	GT	GAS	P	U	

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] Units repowered by adding new combustion turbines and new heat recovery steam generators to existing steam units.

Gas-Fired Generating Unit Additions[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
95/05	SERC	SOU	FL	GUPC	PEAKING	126	GT	GAS	P	U	
95/05	SERC	SOU	GA	GEPC	PEAKING	504	GT	GAS	P	U	
95/05	SERC	SOU	GA	GEPC	PEAKING	63	GT	GAS	P	U	J
95/05	SERC	SOU	GA	SAEP	PEAKING	63	GT	GAS	P	U	J
95/05	SERC	VAC	SC	SOCG	UNDETERMINED 4	93	GT	NG	P	U	
95/05	SPP	N	MO	MIPU	RALPH GREEN 4	72	GT	NG	L	U	
95/05	SPP	N	MO	STJO	LAKE ROAD 8	75	GT	NG	P	U	
95/06	MAIN	WUM	WI	MGE	COMBUSTION TURBINE	72	UN	NG	P	U	
95/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U	
95/06	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U	
95/06	MAIN	WUM	WI	WPS	LANDFILL GAS	3	ST	GAS	P	U	
95/06	NPCC	NE	MA	CES	CES CC 1	96.7[b]	CC	NG	P	U	
95/06	SPP	N	KS	EMDE	RIVERTON 6	32	ST	NG	P	U	
95/06	SPP	N	MO	EMDE	ENERGY CENTER 3	75	CA	NG	P	U	
95/06	SPP	WC	OK	OMPA	UNKNOWN	35	GT	NG	P	U	
95/06	WSCC	CNV	CA	SDGE	COMBINED CYCLE 1	144	CT	NG	P	U	
95/10	MAPP		SA	SPC	FUTURE PEAKING 2	46	GT	NG	P	U	
SUBTOTAL						4473					
96/01	ERCOT		TX	TMPA	UNDESIGNATED	100	GT	NG	P	U	
96/01	SERC	FL	FL	HSTM	G. W. Ivey 10	2.5	IC	NG	P	U	
96/01	WSCC	AZN	TX	EPE	GENERIC STATION #1	70	GT	NG	P	U	
96/03	SPP	N	MO	KACP	COMB. TURBINE 1	105	GT	NG	P	U	
96/03	SPP	N	MO	KACP	COMB. TURBINE 2	105	GT	NG	P	U	
96/04	ECAR		OH	CG&E	Woodsdale 8	77	GT	NG	L	U	
96/04	ECAR		OH	CG&E	Woodsdale 9	77	GT	NG	L	U	
96/04	ECAR		OH	CG&E	Woodsdale 10	78	GT	NG	L	U	
96/04	ECAR		OH	CG&E	Woodsdale 11	77	GT	NG	L	U	
96/04	ECAR		OH	CG&E	Woodsdale 12	77	GT	NG	L	U	
96/04	ECAR		UN	CG&E	New GT 1	65	GT	NG	P	U	
96/04	ECAR		UN	CG&E	New GT 2	65	GT	NG	P	U	
96/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
96/04	WSCC	RMP	CO	PSC	FT ST VRAIN	330	ST	NG	P	U	
96/05	MAAC		MD	PPCO	CC Component 3	127	CT	NG	L	U	
96/05	MAAC		UN	GPUS	Combined Cycle	100	CW	NG	P	U	
96/05	MAAC		UN	GPUS	Combustion Turbines	100	GT	NG	P	U	
96/05	MAAC		UN	GPUS	Combustion Turbines	200	CT	NG	P	U	
96/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	P	U	
96/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	P	U	
96/05	SERC	SOU	AL	ALAP	PEAKING	252	GT	GAS	P	U	
96/05	SPP	N	MO	MIPU	RALPH GREEN 2	20	CW	NG	L	U	
96/06	MAAC		MD	BCCO	Perryman 51	131	GT	NG	P	U	
96/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U	
96/06	SERC	SOU	AL	ALEC	CAES 2[c]	110	ZZ	NG	P	U	
96/06	SPP	N	MO	EMDE	UNKNOWN 96	32	GT	NG	P	U	
96/06	WSCC	CNV	CA	SDGE	COMBINED CYCLE 2	144	CT	NG	P	U	
96/11	NPCC	NE	MA	MMWE	STONYBROOK 3 CC	200	CC	NG	P	U	
96/12	ERCOT		TX	WETU	RIO PECOS #5	88	CT	NG	P	U	
SUBTOTAL						3113					

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] Hypothetical unit to fill anticipated resource requirement. Actual resources may come from some other resources.

[c] Compressed air energy storage.

Gas-Fired Generating Unit Additions[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
97/04	ECAR		UN	CG&E	New GT 3	65	GT	NG	P	U	
97/04	ECAR		UN	CG&E	New GT 4	65	GT	NG	P	U	
97/04	ECAR		UN	CG&E	New GT 5	65	GT	NG	P	U	
97/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
97/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
97/04	ERCOT		TX	TUEC	COMBUSTION TURBINE	375	CT	NG	P	U	
97/04	WSCC	RMP	CO	CCS	NIXON CT 1	54	GT	NG	P	U	
97/05	MAAC		UN	GPUS	Combined Cycle	100	CW	NG	P	U	
97/05	MAAC		UN	GPUS	Combustion Turbines	100	GT	NG	P	U	
97/05	MAPP		UN	ISU	FUTURE GT 2	50	GT	NG	P	U	
97/05	SERC	SOU	AL	ALAP	PEAKING	252	GT	GAS	P	U	
97/05	SERC	SOU	GA	GEPC	PEAKING	630	GT	GAS	P	U	
97/05	SERC	SOU	GA	GEPC	PEAKING	95	GT	GAS	P	U	J
97/05	SERC	SOU	GA	SAEP	PEAKING	31	GT	GAS	P	U	J
97/06	MAAC		MD	BCCO	Perryman 52	131	GT	NG	P	U	
97/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	225	GT	NG	P	U	
97/06	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U	
97/06	SERC	SOU	MS	SOMI	MOSELLE	80	CT	NG	P	U	
97/06	SPP	N	MO	EMDE	ENERGY CENTER 4	75	CA	NG	P	U	
97/07	ECAR		KY	LG&E	Cane Run 12	75	GT	NG	P	U	
97/11	SERC	FL	FL	FLPC	Combined Cycle 1	182	CC	NG	P	U	
SUBTOTAL						2935					
98/01	ERCOT		TX	BEPC	UNDESIGNATED	104	GT	NG	P	U	
98/01	MAPP		MN	SMMP	FUTURE COMB CYCLE 1	80	CT	NG	P	U	
98/01	SERC	FL	FL	LALW	Unknown 2	50	GT	NG	P	U	
98/01	SERC	SOU	AL	ALEC	CT 1	75	GT	NG	P	U	
98/01	SERC	SOU	AL	ALEC	CT 2	75	GT	NG	P	U	
98/01	WSCC	AZN	TX	EPE	GENERIC STATION #2	70	GT	NG	P	U	
98/03	SPP	N	MO	KACP	COMB. TURBINE 3	105	GT	NG	P	U	
98/04	ECAR		UN	CG&E	New Comb. Cycle 1	187	CT	NG	P	U	
98/04	ECAR		UN	IP&L	Undesignated	80	GT	NG	P	U	
98/05	ERCOT		TX	CPSA	GT98 #1	70	CT	NG	U	U	
98/05	ERCOT		TX	CPSA	GT98 #2	70	CT	NG	P	U	
98/05	MAAC		MD	PPCO	CC Component 4	127	CT	NG	L	U	
98/05	MAAC		UN	GPUS	Combined Cycle	100	CW	NG	P	U	
98/05	MAAC		UN	GPUS	Combustion Turbines	300	GT	NG	P	U	
98/05	SERC	SOU	FL	GUPC	PEAKING	126	GT	GAS	P	U	
98/05	SERC	SOU	GA	GEPC	PEAKING	630	GT	GAS	P	U	
98/05	SERC	SOU	GA	GEPC	PEAKING	94	GT	GAS	P	U	J
98/05	SERC	SOU	GA	SAEP	PEAKING	32	GT	GAS	P	U	J
98/06	MAAC		MD	BCCO	Perryman 61	131	GT	NG	P	U	
98/06	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	75	GT	NG	P	U	
98/06	SERC	FL	FL	GAMW	Unknown 1	35	GT	NG	P	U	
98/06	SPP	N	MO	EMDE	UNKNOWN 98	32	GT	NG	P	U	
98/06	SPP	WC	OK	OMPA	UNKNOWN	35	GT	NG	P	U	
98/06	WSCC	AZN	AZ	APS	GENERIC CT 1-3	210	GT	NG	P	U	
98/12	ERCOT		TX	WETU	RIO PECOS #6	33	CT	NG	P	U	
98/UN	MAIN	SCI	IL	CIL	COMBUSTION TURBINE	80	CT	NG	P	U	
SUBTOTAL						3006					

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

Gas–Fired Generating Unit Additions[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
99/01	ERCOT		TX	TMPA	UNDESIGNATED	100	GT	NG	P	U	
99/01	SERC	SOU	AL	ALEC	CT 3	75	GT	NG	P	U	
99/01	WSCC	CNV	CA	SDGE	COMBINED CYCLE 3	132	CT	NG	P	U	
99/04	ECAR		UN	PSI	Undesignated	130	GT	NG	P	U	
99/05	ERCOT		TX	CPSA	GT99 #1	70	CT	NG	P	U	
99/05	ERCOT		TX	CPSA	GT99 #2	70	CT	NG	P	U	
99/05	ERCOT		TX	CPSA	GT99 #3	70	CT	NG	P	U	
99/05	MAAC		UN	GPUS	Combined Cycle	100	CW	NG	P	U	
99/05	MAAC		UN	GPUS	Combustion Turbines	300	GT	NG	P	U	
99/05	MAAC		UN	PSCO	Combined Cycle 1	400	CC	NG	P	U	
99/05	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	P	U	
99/05	SERC	SOU	AL	ALAP	PEAKING	126	GT	GAS	P	U	
99/05	SERC	SOU	GA	GEPC	PEAKING	630	GT	GAS	P	U	
99/05	SERC	SOU	MS	MIPR	PEAKING	126	GT	GAS	P	U	
99/05	SPP	WC	OK	OKGE	UNKNOWN 99	170	GT	NG	P	U	
99/06	MAAC		MD	BCCO	Perryman 62	131	GT	NG	P	U	
99/06	MAIN	SCI	IL	CWLP	LAKESIDE 5	20	CA	NG	P	U	
99/06	MAIN	SCI	IL	CWLP	LAKESIDE GT2	36[b]	CT	NG	P	U	
99/06	MAIN	WUM	WI	MGE	COMBUSTION TURBINE	36	UN	NG	P	U	
99/06	MAIN	WUM	WI	WEP	COMBINED CYCLE	70	CC	NG	P	U	
99/06	SERC	FL	FL	GAMW	Unknown 2	35	GT	NG	P	U	
99/06	SPP	N	MO	EMDE	UNKNOWN 99	32	GT	NG	P	U	
99/06	SPP	SE	AR	AREC	COMBUSTION TURBINE	100	CT	NG	P	U	
99/06	WSCC	AZN	AZ	APS	GENERIC CT 4-5	140	GT	NG	P	U	
99/07	ERCOT		TX	LCRA	UNSPECIFIED	127	GT	NG	P	U	
99/11	SERC	FL	FL	FLPC	Combined Cycle 2	182	CC	NG	P	U	
99/12	ERCOT		TX	WETU	COMBUSTION TURBINE #1	135	GT	NG	P	U	
SUBTOTAL						3618					
TOTAL						24310					

---

[a] Electric utility units only. Excludes non–utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] Part of CWLP's coal gasification/combined cycle demonstration plant.

Pumped Storage Generating Unit Additions[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/12	SERC	SOU	GA	SEPA	RUSSELL HYDRO #5	75	PS	WAT	U	U	
SUBTOTAL						75					
91/03	SERC	VAC	GA	SEPA	RUSSELL HYDRO #6	75	PS	WAT	U	U	
91/06	SERC	SOU	GA	SEPA	RUSSELL HYDRO #7	75	PS	WAT	U	U	
91/09	SERC	VAC	GA	SEPA	RUSSELL HYDRO #8	75	PS	WAT	U	U	
SUBTOTAL						225					
92/04	SERC	VAC	SC	DUPC	BADCREEK 1	266	PS	WAT	U	U	
92/04	SERC	VAC	SC	DUPC	BADCREEK 2	266	PS	WAT	U	U	
SUBTOTAL						532					
93/01	SERC	VAC	SC	DUPC	BADCREEK 3	266	PS	WAT	U	U	
93/01	SERC	VAC	SC	DUPC	BADCREEK 4	266	PS	WAT	U	U	
SUBTOTAL						532					
94/02	WSCC	AZN	AZ	USLC	WADDELL (4)	45	PS	WAT	U	U	
94/04	WSCC	RMP	CO	CCS	STANLEY CANYON PUMP HYDRO	64	PS	WAT	T	U	
SUBTOTAL						109					
95/05	WSCC	CNV	CA	RDNG	SPRING CREEK PS	50	PS	WAT	L	U	
SUBTOTAL						50					
96/05	SERC	SOU	GA	GEPC	ROCKY MTN 1-3	848	PS	WAT	U	U	
SUBTOTAL						848					
TOTAL						2371					

---

[a] Electric utility units only. Excludes non–utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

Other Utility Generating Unit Additions[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/03	SPP	N	KS	KACP	GARDNER	20	ST	MUL	V	U	
90/03	WSCC	NWP	WA	TCL	STEAM PLANT NO. 2	38	CG	REF	V	U	
90/06	ERCOT		TX	TUEC	TEX-LA (SPA)	-50[b]	UN	UNK	P	U	
90/06	SERC	VAC	VA	VIEP	Chesterfield 7	62	CW	WH	U	U	
SUBTOTAL						70					
91/01	WSCC	CNV	CA	PG&E	PVUSA 1	1	SO	SUN	U	U	
91/01	WSCC	NWP	UT	PEOG	COVE FORT 1	7	GE	GST	P	U	
91/06	SPP	SE	TX	LUPL	WASTE RECOVERY 1	10	ST	REF	T	U	
91/07	WSCC	CNV	CA	GLEN	SCHOLL CANYON 2	0	IC	REF	U	U	
91/07	WSCC	CNV	CA	SCE	COOLWATER IGCC	25	CW	WH	V	U	
SUBTOTAL						43					
92/01	WSCC	CNV	CA	PG&E	PVUSA 2	1	SO	SUN	T	U	
92/04	SERC	TVA	UN	TEVA	UNDETERMINED X1	350	UN	UNK	P	U	
92/05	SERC	VAC	SC	SOCG	WILLIAMS HEAT RECOVERY	14	CW	WH	P	U	
92/05	WSCC	CNV	CA	RDNG	UNIDENTIFIED COGEN 1	19	CG	ZZ	P	U	
92/05	WSCC	CNV	CA	RDNG	UNIDENTIFIED COGEN 2	19	CG	ZZ	P	U	
92/06	SERC	VAC	VA	VIEP	Chesterfield 8	64	CW	WH	U	U	
SUBTOTAL						467					
93/01	WSCC	CNV	CA	PG&E	PVUSA 3	1	SO	SUN	T	U	
93/02	WSCC		MX	CFE	CERRO PRIETO IV UNIT 1	19	GE	GST	P	U	
93/05	WSCC		MX	CFE	CERRO PRIETO IV UNIT 2	19	GE	GST	P	U	
93/10	SERC	TVA	UN	TEVA	UNDETERMINED X2	350	UN	UNK	P	U	
SUBTOTAL						389					
94/01	WSCC	AZN	AZ	APS	SOLAR 1	2	SO	SUN	U	U	
94/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
94/05	MAAC		DE	DPLC	Hay Road 4	150	CW	WH[c]	P	U	
94/05	MAPP		UN	NSP	FUTURE PEAKER 1	100	UN	UNK	P	U	
94/06	ERCOT		TX	TUEC	UNSPECIFIED	300[d]	UN	UNK	P	U	
94/06	MAAC		MD	PPCO	Muni. Solid Waste	50	ST	REF	P	U	
94/06	SERC	SOU	MS	SOMI	MOSELLE	40	CW	WH	P	U	
94/09	ERCOT		TX	TUEC	UNSPECIFIED	-300[b]	UN	UNK	P	U	
SUBTOTAL						592					
95/01	ECAR		UN	EKPC	Unknown	240[e]	UN	UNK	P	U	
95/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	313[f]	ZZ	UNK	P	U	
95/01	WSCC		MX	CFE	CERRO PRIETO IV UNIT 3	19	GE	GST	P	U	
95/01	WSCC	CNV	CA	NCPA	UNID. GENERIC BASE	25	ZZ	UNK	P	U	
95/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
95/04	ERCOT		TX	TUEC	UNSPECIFIED	300[d]	UN	UNK	P	U	
95/05	SERC	VAC	UN	UNK	UNDESIGNATED	500	UN	UNK	P	U	
95/05	WSCC		MX	CFE	CERRO PRIETO IV UNIT 4	19	GE	GST	P	U	
95/06	MAIN	WUM	WI	WPS	MASS BURN	4	ST	REF	P	U	
95/06	WSCC	CNV	CA	SDGE	COMBINED CYCLE 1	86	CW	WH	P	U	
95/10	WSCC		AB	TAUC	NEW GENERATION	200	ZZ	UNK	P	U	
SUBTOTAL						1956					

[a] Electric utility units other than nuclear, coal-, oil-, and gas-fired, conventional hydro, and pumped storage units. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] Contract for firm purchase power expires.

[c] Waste heat generated by Hay Road 1, 2, and 3.

[d] Unspecified resources, may be one or more of the following: purchases from qualifying facilities (cogenerators and/or small power producers) or other utilities, simple cycle or combined cycle combustion turbines, additional reductions in demand resulting from conservation or load management programs, or solid fueled baseload generating units.

[e] Best combination of combustion turbines, load management, dispersed generation, and/or firm purchases.

[f] Identified (but not planned) potential resource(s) added to achieve a nominal 20% reserve margin. Viable contingency resources potentially available to meet this future requirement exceed the amount listed and include the expansion of DSM programs, additional NUGs, additional purchases, or additional utility generation.

Other Utility Generating Unit Additions[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
96/01	ERCOT		TX	HL&P	ADDITIONAL CAPACITY NEED	200[b]	UN	UNK	P	U	
96/01	ERCOT		TX	HL&P	COMB. CYCLE CONVERSION	160	CW	WH	P	U	
96/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	502[c]	ZZ	UNK	P	U	
96/01	WSCC	CNV	CA	SMUD	UNIDENTIFIED PEAKING	147	ZZ	UNK	P	U	
96/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
96/05	SERC	VAC	UN	UNK	UNDESIGNATED	350	UN	UNK	P	U	
96/05	SPP	N	MO	MIPU	PLANT X 1	100	ST	UNK	P	U	
96/06	WSCC	CNV	CA	SDGE	COMBINED CYCLE 2	86	CW	WH	P	U	
96/10	SERC	TVA	UN	TEVA	UNDETERMINED X3	500	UN	UNK	P	U	
96/10	WSCC		AB	TAUC	NEW GENERATION	200	ZZ	UNK	P	U	
SUBTOTAL						2495					
97/01	ECAR		UN	EKPC	Unknown	60[d]	UN	UNK	P	U	
97/01	ERCOT		TX	HL&P	ADDITIONAL CAPACITY NEED	200[b]	UN	UNK	P	U	
97/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	430[c]	ZZ	UNK	P	U	
97/01	WSCC	CNV	CA	LDWP	GENERIC 1997	100	ZZ	UNK	P	U	
97/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
97/04	ERCOT		TX	TUEC	UNSPECIFIED	150[e]	UN	UNK	P	U	
97/05	MAPP		UN	NSP	FUTURE PEAKER 2	100	UN	UNK	P	U	
97/05	SERC	VAC	UN	UNK	UNDESIGNATED	300	UN	UNK	P	U	
97/05	SPP	N	MO	MIPU	PLANT X 2	100	ST	UNK	P	U	
97/10	WSCC		AB	TAUC	NEW GENERATION	200	ZZ	UNK	P	U	
SUBTOTAL						1890					
98/01	ECAR		UN	EKPC	Unknown	60[d]	UN	UNK	P	U	
98/01	ERCOT		TX	HL&P	ADDITIONAL CAPACITY NEED	200[b]	UN	UNK	P	U	
98/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	543[c]	ZZ	UNK	P	U	
98/01	SERC	FL	FL	TAEC	Heat Recovery Steam Generator	61.8	CW	WH	P	U	
98/01	WSCC	AZN	AZ	APS	SOLAR 2	8	SO	SUN	P	U	
98/01	WSCC	CNV	CA	LDWP	GENERIC 1998	200	ZZ	UNK	P	U	
98/01	WSCC	CNV	CA	NCPA	UNID. GENERIC BASE	25	ZZ	UNK	P	U	
98/03	SERC	VAC	UN	CAPO	UNDESIGNATED	500	UN	UNK	P	U	
98/05	MAPP		UN	NSP	FUTURE BASE 1	400	UN	UNK	P	U	
98/05	SERC	VAC	UN	UNK	UNDESIGNATED	300	UN	UNK	P	U	
98/06	SERC	SOU	MS	SOMI	MOSELLE	40	CW	WH	P	U	
98/10	SERC	TVA	UN	TEVA	UNDETERMINED X4	300	UN	UNK	P	U	
98/10	WSCC		AB	TAUC	NEW GENERATION	200	ZZ	UNK	P	U	
SUBTOTAL						2838					
99/01	ECAR		MI	DECO	Unknown	150	UN	UNK	P	U	
99/01	ERCOT		TX	HL&P	ADDITIONAL CAPACITY NEED	200[b]	UN	UNK	P	U	
99/01	NPCC	NE	UN	UNK	CONTINGENT RESOURCE (S)	672[c]	ZZ	UNK	P	U	
99/01	WSCC	CNV	CA	LDWP	GENERIC 1999	100	ZZ	UNK	P	U	
99/01	WSCC	CNV	CA	SDGE	COMBINED CYCLE 3	92	CW	WH	P	U	
99/03	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U	
99/04	ERCOT		TX	TUEC	UNSPECIFIED	300[e]	UN	UNK	P	U	
99/04	ERCOT		TX	TUEC	UNSPECIFIED	650[e]	UN	UNK	P	U	
99/04	MAIN	CE	UN	CECO	COMBUSTION TURBINE	400	CT	UNK	P	U	
99/10	WSCC		AB	TAUC	NEW GENERATION	300	ZZ	UNK	P	U	
SUBTOTAL						3114					
TOTAL						13854					

---

[a] See page 149, footnote a.

[b] Capacity needed to help meet HL&P's minimum reserve requirement.

[d] See page 149, footnote d.

[c] See page 149, footnote e.

[e] See page 149, footnote c.

Non-Utility Generator (NUG) Additions[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/01	ECAR		MI	DECO	One facility	7	ST	UNK	P	ZZ	
90/01	ECAR		UN	WPSC	Unidentified	5	UN	UNK	P	ZZ	
90/01	MAAC		NJ	GPUS	Gloucester Co. RR - NUG	11[b]	ST	REF	V	ZZ	
90/01	MAAC		NJ	GPUS	L&D Landfill - NUG	4[b]	IC	GAS	V	ZZ	
90/01	MAAC		PA	GPUS	York County RR - NUG	30[b]	ST	REF	V	ZZ	
90/01	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	0.1	UN	GAS	V	ZZ	
90/01	WSCC	CNV	CA	PG&E	QF COGENERATION 90	391	CG	UNK	P	CG	
90/01	WSCC	CNV	CA	PG&E	QF GEOTHERMAL 90	20	GE	GST	P	ZZ	
90/01	WSCC	CNV	CA	PG&E	QF HYDRO 90	11	HY	WAT	P	ZZ	
90/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 90	145	ZZ	UNK	P	ZZ	
90/01	WSCC	CNV	CA	PG&E	QF WIND 90	9	WM	WND	P	ZZ	
90/01	WSCC	CNV	CA	SDGE	QF BIOGAS (1)	1	IC	ZZ	P	ZZ	
90/01	WSCC	CNV	CA	SDGE	QF COGENERATION	29	CG	NG	P	CG	
90/01	WSCC	CNV	CA	SDGE	QF COGENERATION	6	CG	ZZ	P	CG	
90/01	WSCC	NWP	ID	EWEB	SMITH CREEK	10	HY	WAT	P	ZZ	
90/01	WSCC	NWP	WA	PSPL	TWIN FALLS	20	HY	WAT	P	ZZ	
90/02	ECAR		MI	CP	MCV Contract	806	CA	NG	P	ZZ	
90/02	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	77	UN	UNK	V	ZZ	
90/02	NPCC	NE	ME	CMP	Lewiston Steam & Power PhII EX	3.4	ST	BIO	V	ZZ	
90/02	NPCC	NE	RI	NEES	Northeast Landfill (Johnston)	5	IC	GAS	U	ZZ	
90/02	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	53.7	UN	GAS	V	ZZ	
90/02	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	23[c]	ZZ	UNK	V	ZZ	
90/02	SERC	VAC	UN	VIEP	WYTHE PARK POWER 2	2	IC	OIL	P	ZZ	
90/03	MAAC		NJ	GPUS	Newark Boxboard - NUG	52[b]	GT	NG	V	ZZ	
90/03	MAAC		PA	PLCO	Amity Landfill - NUG	2	IC	GAS	V	ZZ	
90/03	MAAC		PA	PLCO	Foster Wheeler - NUG	40	FB	CUL	V	ZZ	
90/03	NPCC	NE	CT	NU	AES Thames	79	ST	COL	V	ZZ	
90/03	NPCC	NE	CT	NU	Dexter Corp. CH	38	CC	MUL	V	ZZ	
90/03	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	10	UN	REF	V	ZZ	
90/03	SERC	FL	FL	FLPL	TROPICANA PROD. INC. 1-2	0	CG	NG	P	CG	
90/04	NPCC	NE	VT	VTGP	Springfield (Fellows/Lovejoy)	0.4	HY	WAT	V	ZZ	
90/04	NPCC	NY	NY	ROGE	NON-UTILITY GENERATORS	0.9	HY	WAT	V	ZZ	
90/04	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	1[c]	ZZ	UNK	V	ZZ	
90/04	SERC	FL	FL	FLPC	LFC #47 1	9	UN	WD	P	ZZ	
90/04	WSCC	NWP	ID	IPC	HAZELTON A SMALL HYDRO	8	HY	WAT	P	ZZ	
90/05	MAAC		PA	GPUS	Frontier Energy - NUG	15.5[b]	GT	NG	U	ZZ	
90/05	NPCC	NE	CT	NU	Quinebaug Five Mile Hydro BHB	2.16	HY	WAT	V	ZZ	
90/05	NPCC	NE	MA	CES	Pepperell	34.6	CC	GAS	T	ZZ	
90/05	NPCC	NE	ME	CMP	Boise Cascade (Rumford Cogen)	29	ST	BIO	V	CG	
90/05	NPCC	NE	RI	NEES	Northeast Landfill (Johnston)	7	IC	GAS	U	ZZ	
90/05	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	10	ST	GAS	T	ZZ	
90/05	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	2[c]	ZZ	UNK	V	ZZ	
90/05	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	21	UN	UNK	P	ZZ	
90/05	SERC	VAC	UN	VIEP	CORE-CHESTERFIELD	3	GT	GAS	P	ZZ	
90/05	SERC	VAC	UN	VIEP	HOPEWELL COGEN	306	ST	UNK	P	CG	
90/05	SPP	WC	OK	OKGE	COGENERATOR - CONOCO	52	ST	NG	V	CG	
90/05	WSCC	NWP	WA	GCPD	P.E.C. HEADWORKS	7	HY	WAT	V	ZZ	
90/06	ECAR		IN	IP&L	One facility	4	ST	REF	P	ZZ	
90/06	MAAC		NJ	GPUS	Hamm's Landfill - NUG	1[b]	IC	GAS	U	ZZ	
90/06	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	3.3	UN	REF	V	ZZ	

[a] Non-utility generators (NUGs) include the capacity of only those non-utility units that sell or are projected to sell electric energy or capacity, or both, to electric utilities and which are expected to be available to the electric utility system at the time of peak demand.

[b] Facilities qualifying under PURPA which may be waste burning (trash, waste coal), small hydro, third party financed or self-generation, cogeneration (in excess of internal load served), wind, solar, etc.

[c] Includes industrial non-utility generation, power from municipal waste, and/or small hydro developments.

Non-Utility Generator (NUG) Additions[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/06	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	2[b]	ZZ	UNK	V	ZZ	
90/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 01 (UNK)	0	CG	NG	P	CG	
90/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 03 (UNK)	0	CG	NG	P	CG	
90/06	SERC	VAC	UN	VIEP	OGDEN MARTIN SYSTEMS	60	ST	REF	P	ZZ	
90/07	ECAR		PA	APS	Milesburg	43	ST	CUL	P	ZZ	
90/07	ECAR		UN	CP	One facility	50	UN	COL	P	ZZ	
90/07	MAAC		PA	PLCO	Lycoming Landfill - NUG	1	IC	GAS	U	ZZ	
90/07	NPCC	NE	CT	NU	Wallingford Refuse (CRRA)	2.3	ST	REF	V	ZZ	
90/07	NPCC	NE	MA	NEES	Altresco/G.E.	161	CC	GAS	U	ZZ	
90/07	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	2.2	HY	WAT	V	ZZ	
90/07	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	50.4	UN	GAS	V	ZZ	
90/07	SERC	VAC	UN	VIEP	COGENTRIX - ROCKY MT.	105	ST	COL	P	CG	
90/07	SERC	VAC	UN	VIEP	DALE FACILITY	3	GT	GAS	P	ZZ	
90/07	SERC	VAC	UN	VIEP	HUDDLESTON	2	ST	WD	P	ZZ	
90/07	SERC	VAC	UN	VIEP	STS HYDRO	3	HY	WAT	P	ZZ	
90/07	WSCC	CNV	CA	SCE	BATTERY STORAGE	10	ZZ	UNK	V	ZZ	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY BIOMASS	94	IC	UNK	P	ZZ	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY COGEN.	138	CG	UNK	P	CG	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY COGEN.	158	CG	NG	P	CG	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY GEOTHERMAL	51	GE	GST	P	ZZ	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY SOLAR	71	SO	SUN	P	ZZ	
90/07	WSCC	CNV	CA	SCE	NON-UTILITY WIND	26	WM	WND	P	ZZ	
90/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	-10	ZZ	UNK	P	ZZ	
90/08	MAAC		NJ	GPUS	Dupont - NUG	92[c]	GT	NG	V	ZZ	
90/08	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	4.8	UN	REF	V	ZZ	
90/08	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	121[b]	ZZ	UNK	V	ZZ	
90/09	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-300[d]	UN	UNK	P	ZZ	
90/09	MAAC		PA	PLCO	Archbald Power - NUG	21	FB	CUL	V	ZZ	
90/09	SERC	FL	FL	FLPC	LAKE COUNTY RESOURCE REC. 1	10	UN	REF	P	ZZ	
90/09	SERC	VAC	UN	VIEP	RICHMONT POWER	210	CA	UNK	P	ZZ	
90/09	WSCC	NWP	WA	PSPL	KOMA KULSHAN	12	HY	WAT	P	ZZ	
90/09	WSCC	RMP	CO	PSC	COLO. POWER PROJECT #1	50	CG	NG	V	CG	
90/10	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	15	HY	WAT	U	ZZ	
90/10	NPCC	NY	NY	POAS	NON-UTILITY GENERATORS	2.5	UN	GAS	P	ZZ	
90/10	WSCC	NWP	NV	SPP	STILLWATER GEOTHERMAL 2	13	GE	GST	P	ZZ	
90/11	NPCC	NE	CT	NU	O'Brien/Hartford	53.5	CC	MUL	U	ZZ	
90/11	NPCC	NE	RI	NEES	E.M.I. (Pawtucket Power)	61	CC	GAS	U	ZZ	
90/11	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	3.2	UN	REF	U	ZZ	
90/11	NPCC	NY	PA	NEYE	NON-UTILITY GENERATORS	46	HY	WAT	U	ZZ	
90/11	SERC	VAC	UN	VIEP	PANDA	150	IC	NG	P	ZZ	
90/11	WSCC	RMP	CO	PSC	LAKEWOOD HYDRO	2	HY	WAT	T	ZZ	
90/11	WSCC	RMP	CO	PSC	TWIN TUNNELS HYDRO	1	HY	WAT	T	ZZ	
90/12	ECAR		UN	CG&E	Unidentified Facility	8	UN	UNK	P	ZZ	
90/12	ECAR		WV	APS	Sutton	2	HY	WAT	P	ZZ	
90/12	MAAC		NJ	PSCO	Essex County RRF - NUG	67	UN	REF	P	ZZ	
90/12	MAAC		PA	GPUS	Lancaster Co. RR - NUG	34[c]	ST	REF	U	ZZ	
90/12	NPCC	NE	VT	VTGP	Dodge Falls - Hydro Co.	2.5	HY	WAT	U	ZZ	
90/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	16.5	HY	WAT	T	ZZ	
90/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	5	UN	REF	T	ZZ	
90/12	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	49	UN	UNK	P	ZZ	

---

[a] See page 151, footnote a.

[b] See page 151, footnote c.

[c] See page 151, footnote b.

[d] Contract for firm purchase power expires.

Non–Utility Generator (NUG) Additions[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/12	SERC	FL	FL	FLPL	COMM. COGENERATOR 02 (1)	0	CG	NG	P	CG	
90/12	SERC	VAC	NC	CAPO	CRAVEN COUNTY WOOD ENERGY	45	ST	WD	U	ZZ	
90/12	SERC	VAC	UN	VIEP	ENERGY ENGINEERING	14	ST	WD	P	ZZ	
SUBTOTAL						4242					
91/01	ECAR		MI	CP	One facility	29	UN	COL	P	ZZ	
91/01	ECAR		MI	DECO	One facility	5	ST	REF	P	ZZ	
91/01	ECAR		UN	PSI	Unidentified	6	UN	UNK	P	ZZ	
91/01	MAAC		UN	PSCO	Small QF's - NUG	20	UN	UNK	P	ZZ	
91/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	1	HY	WAT	U	ZZ	
91/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	17.8	UN	WD	T	ZZ	
91/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	59[b]	ZZ	UNK	V	ZZ	
91/01	SERC	FL	FL	FLPC	PASCO WASTE RECOVERY 1	23	UN	REF	P	ZZ	
91/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 08 (UNK)	0	CG	NG	P	CG	
91/01	SERC	FL	FL	FLPL	IND. COGENERATOR 02 (UNK)	0	CG	COL	P	CG	
91/01	WSCC	CNV	CA	LDWP	NON-UTILITY COGEN.	10	CG	UNK	P	CG	
91/01	WSCC	CNV	CA	PG&E	QF COGENERATION 91	167	CG	UNK	P	CG	
91/01	WSCC	CNV	CA	PG&E	QF GEOTHERMAL 91	3	GE	GST	P	ZZ	
91/01	WSCC	CNV	CA	PG&E	QF HYDRO 91	1	HY	WAT	P	ZZ	
91/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 91	30	ZZ	UNK	P	ZZ	
91/01	WSCC	CNV	CA	PG&E	QF WIND 91	9	WM	WND	P	ZZ	
91/01	WSCC	NWP	ID	PEOG	ENERGENICS	2	HY	WAT	P	ZZ	
91/01	WSCC	NWP	ID	PEOG	ENVIRONMENTAL ENERGY CO.	8	HY	WAT	P	ZZ	
91/01	WSCC	NWP	MT	MPC	MONTANA ONE	35	CG	ZZ	P	CG	
91/01	WSCC	NWP	UT	PEOG	KAISER COGEN	45	CG	BIT	P	CG	
91/01	WSCC	NWP	WA	SHPD	SUMMIT COGEN	10	CG	WD	L	CG	
91/01	WSCC	RMP	CO	PSC	GEORGETOWN HYDRO DAM	0	HY	WAT	T	ZZ	
91/01	WSCC	RMP	CO	PSC	HIGHLAND CANAL HYDRO	1	HY	WAT	T	ZZ	
91/03	MAAC		PA	GPUS	Cambria Cogen - NUG	80[c]	FB	CUL	U	CG	
91/03	MAAC		PA	GPUS	Ebensburg Power - NUG	50[c]	FB	CUL	U	ZZ	
91/03	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	55	UN	GAS	T	ZZ	
91/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	11	UN	REF	U	ZZ	
91/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	63.8	UN	GAS	U	ZZ	
91/03	SERC	VAC	NC	CAPO	NEW HANOVER COUNTY	3	ST	REF	U	ZZ	
91/03	WSCC	NWP	ID	WWPC	CANYON CREEK (2)	0	HY	WAT	T	ZZ	
91/03	WSCC	NWP	OR	IPC	TUNNEL NO. 1	6	HY	WAT	P	ZZ	
91/03	WSCC	NWP	WA	PSPL	SPOKANE MSW	23	CG	REF	P	CG	
91/04	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-400[d]	UN	UNK	P	ZZ	
91/04	MAAC		NJ	AECO	Mobil - NUG 1	41	CT	NG	U	ZZ	
91/04	NPCC	NE	CT	NU	Waste Mgmt (New Milfd Ld. Fl.)	3	GT	GAS	U	ZZ	
91/04	NPCC	NY	NY	ORRU	NON-UTILITY GENERATORS	16	UN	GAS	P	ZZ	
91/05	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	300	UN	UNK	P	ZZ	
91/05	MAAC		PA	AECO	DRMI - NUG 1	75	ZZ	REF	U	ZZ	
91/05	NPCC	NE	VT	UNITIL	Arrowhead Cogen.	27	ST	MUL	T	CG	
91/05	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	35	UN	GAS	L	ZZ	
91/05	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	5	ST	WD	T	ZZ	
91/05	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	10	UN	GAS	P	ZZ	
91/05	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	13	UN	WD	T	ZZ	
91/05	SERC	VAC	UN	VIEP	N.B. PARTNERS	73	ST	COL	P	ZZ	
91/05	SERC	VAC	UN	VIEP	TURBO POWER 1	100	CC	NG	P	ZZ	

[a] See page 151, footnote a.
[b] See page 151, footnote c.
[c] See page 151, footnote b.
[d] See page 152, footnote d.

Non-Utility Generator (NUG) Additions[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
91/05	SERC	VAC	UN	VIEP	TURBO POWER 2	100	CC	NG	P	ZZ	
91/05	SPP	WC	OK	OKGE	COGENERATOR - AES[b]	300	ST	BIT	V	CG	
91/06	MAAC		NJ	GPUS	Camden Co. RR - NUG	21	ST	REF	U	ZZ	
91/06	MAAC		NJ	GPUS	Continental, Sayre - NUG	250[c]	CW	NG	U	ZZ	
91/06	MAAC		NJ	PSCO	Eagle Point - NUG	160	CW	NG	T	ZZ	
91/06	NPCC	NE	CT	NU	Exeter Energy (Oxford)	26	ST	ZZ	U	ZZ	
91/06	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	104	UN	GAS	T	ZZ	
91/06	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	3.5	HY	WAT	P	ZZ	
91/06	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	7.5	UN	WD	T	ZZ	
91/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 04 (UNK)	0	CG	NG	P	CG	
91/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 05 (UNK)	0	CG	NG	P	CG	
91/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 06 (UNK)	0	CG	NG	P	CG	
91/06	SERC	FL	FL	FLPL	COMM. COGENERATOR 07 (UNK)	0	CG	NG	P	CG	
91/06	SERC	VAC	UN	VIEP	COGENTRIX - RICHMOND	190	ST	COL	P	CG	
91/06	WSCC	RMP	CO	PSC	RALSTON HYDRO FACILITY	0	HY	WAT	T	ZZ	
91/07	ECAR		WV	APS	Randolph	3	HY	WAT	P	ZZ	
91/07	NPCC	NE	CT	NU	SE CT. Regional CRRA(Proctor)	13.85	ST	REF	U	ZZ	
91/07	NPCC	NE	MA	CES	Northeast Energy Asso 1 & 2	46	CC	GAS	T	ZZ	
91/07	WSCC	CNV	CA	SCE	NON-UTILITY BIOMASS	11	IC	UNK	P	ZZ	
91/07	WSCC	CNV	CA	SCE	NON-UTILITY COGEN.	31	CG	UNK	P	CG	
91/07	WSCC	CNV	CA	SCE	NON-UTILITY GEOTHERMAL	21	GE	GST	P	ZZ	
91/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
91/07	WSCC	RMP	CO	PSC	PEACH QUEEN POWER STAT	3	HY	WAT	T	ZZ	
91/08	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	19	UN	WD	T	ZZ	
91/08	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79.9	UN	GAS	T	ZZ	
91/09	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	79.8	UN	GAS	P	ZZ	
91/09	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	124.9	UN	COL	P	ZZ	
91/09	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	280	UN	GAS	P	ZZ	
91/09	SERC	VAC	UN	VIEP	ULTRASYSTEMS-SOUTHHAMPTON	57	ST	COL	P	ZZ	
91/10	ECAR		PA	APS	Burgettstown	80	ST	CUL	P	ZZ	
91/10	ECAR		UN	APS	PURPA Contingency	-25	UN	UNK	P	ZZ	
91/10	MAAC		NJ	PSCO	Union County RRF - NUG	40	ST	REF	P	ZZ	
91/10	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	37.5	UN	GAS	L	ZZ	
91/10	SERC	FL	FL	FLPC	PINELLAS WASTE REC. NORTH 1	40	UN	REF	P	ZZ	
91/10	SERC	VAC	UN	VIEP	MECKLINBURG COGEN	120	ST	COL	P	CG	
91/10	WSCC		AB	TAUC	NON-UTILITY GENERATION	125	CG	UNK	P	CG	
91/10	WSCC		BC	WKPL	COGEN	5	CG	WD	P	CG	
91/10	WSCC	NWP	ID	PEOG	MARSH VALLEY	2	HY	WAT	P	ZZ	
91/10	WSCC	RMP	CO	PSC	PUEBLO CHEMICAL	65	CG	NG	T	CG	
91/11	MAAC		PA	GPUS	Glendon Energy - NUG	12[c]	ST	REF	L	ZZ	
91/11	NPCC	NE	VT	VTGP	East Georgia	29	ST	GAS	V	ZZ	
91/11	NPCC	NE	VT	VTGP	Swanton Hydro	0.69	HY	WAT	T	ZZ	
91/11	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	41	UN	GAS	T	ZZ	
91/11	SERC	FL	FL	FLPL	IND. COGENERATOR 01 (UNK)	6	CG	NG	P	CG	
91/12	MAAC		NJ	PSCO	Newark Bay - NUG	92	CW	NG	L	ZZ	
91/12	MAAC		NJ	PSCO	Pennsauken RRF - NUG	7	ST	REF	L	ZZ	
91/12	MAAC		UN	GPUS	Non-Utility Generation	25[c]	UN	UNK	L	ZZ	
91/12	NPCC	NE	MA	CES	TONDU Energy Sys.(Lee Mills)	47	CC	GAS	T	ZZ	
91/12	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	159.6	UN	GAS	P	ZZ	
91/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	52	UN	COL	U	ZZ	

[a] See page 151, footnote a.

[b] Applied Energy Services.

[c] See page 151, footnote b.

Non-Utility Generator (NUG) Additions[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
91/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79.3	UN	GAS	L	ZZ	
91/12	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	146	UN	UNK	P	ZZ	
91/12	SERC	VAC	UN	VIEP	DOSWELL L.P.	275	CC	NG	P	ZZ	
91/12	SERC	VAC	UN	VIEP	DOSWELL L.P.	275	CC	NG	P	ZZ	
91/12	SERC	VAC	UN	VIEP	ULTRASYSTEMS - ALTAVISTA	57	ST	COL	P	ZZ	
91/12	SERC	VAC	UN	VIEP	WYTHE PARK POWER 3	3	IC	OIL	P	ZZ	
91/12	SERC	VAC	UN	VIEP	WYTHE PARK POWER 4	3	IC	OIL	P	ZZ	
SUBTOTAL						4808					
92/01	ECAR		MI	CP	MCV Contract	109	CA	NG	P	ZZ	
92/01	ECAR		MI	CP	Three facilities	78	UN	WOD	P	ZZ	
92/01	ECAR		MI	DECO	One facility	5	ST	REF	P	ZZ	
92/01	ECAR		PA	APS	Pt. Marion	2	HY	WAT	P	ZZ	
92/01	ECAR		WV	APS	Grant Town	80	ST	CUL	P	ZZ	
92/01	MAAC		UN	AECO	Small Power Producer 1	15	GT	NG	P	ZZ	
92/01	MAAC		UN	PSCO	Small QF's - NUG	20	UN	UNK	P	ZZ	
92/01	NPCC	NE	CT	NU	Bio-gen Torrington Ptnrshp	13	ST	BIO	T	ZZ	
92/01	NPCC	NE	CT	NU	Flagg/Perkin Elmer(CCF 2)Therm	8.5	CC	MUL	T	ZZ	
92/01	NPCC	NE	MA	BECO	Northeast Energy Asso 1 & 2	198.3	CC	GAS	T	ZZ	
92/01	NPCC	NE	MA	EUA	Northeast Energy Asso	25	CC	GAS	T	ZZ	
92/01	NPCC	NE	NH	VTGP	Bio Energy (Claremont)	15	ST	BIO	T	ZZ	
92/01	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	24	UN	REF	L	ZZ	
92/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	20	UN	REF	L	ZZ	
92/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	79.9	UN	GAS	P	ZZ	
92/01	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	62	UN	GAS	T	ZZ	
92/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	86[b]	ZZ	UNK	P	ZZ	
92/01	SERC	FL	FL	FLPC	OCCIDENTAL CHEMICAL 3	1	CG	WH	P	CG	
92/01	SERC	FL	FL	FLPC	ST. JOE FOREST PRODUCTS 3	11	CG	WD	P	CG	
92/01	SERC	FL	FL	FLPL	ROYSTER PINEY POINT	18	CG	WH	P	CG	
92/01	SERC	VAC	NC	CAPO	FALLS DAM	3	HY	WAT	T	ZZ	
92/01	SERC	VAC	NC	CAPO	HOPE MILLS DAM	1	HY	WAT	T	ZZ	
92/01	SERC	VAC	NC	CAPO	JORDAN DAM	10	HY	WAT	T	ZZ	
92/01	SERC	VAC	UN	CAPO	UNDESIGNATED	7	UN	UNK	P	ZZ	
92/01	WSCC	CNV	CA	PG&E	QF COGENERATION 92	53	CG	UNK	P	CG	
92/01	WSCC	CNV	NV	NEVP	QF MISCELLANEOUS	24	ZZ	UNK	P	ZZ	
92/01	WSCC	NWP	ID	IPC	TWIN EAGLE SMALL HYDRO	0	HY	WAT	P	ZZ	
92/01	WSCC	NWP	WA	PSPL	MARCH POINT COGEN	80	CG	NG	P	CG	
92/02	MAAC		NJ	AECO	PCLP - NUG 1	116	CT	NG	T	ZZ	
92/02	MAAC		NJ	GPUS	Consol.Nat.Gas - NUG	200[c]	GT	NG	L	ZZ	
92/02	MAAC		PA	GPUS	Oxbow,Cornwall - NUG	80[c]	FB	CUL	L	ZZ	
92/02	MAAC		PA	GPUS	Scrubgrass Power - NUG	80[c]	FB	CUL	L	ZZ	
92/02	SERC	VAC	UN	VIEP	ULTRASYSTEMS - HOPEWELL	57	ST	COL	P	ZZ	
92/03	ECAR		UN	APS	PURPA 1	49	ST	CUL	P	ZZ	
92/03	MAAC		NJ	PSCO	Passaic County RRF - NUG	40	ST	REF	P	ZZ	
92/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	0.4	HY	WAT	U	ZZ	
92/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	47	UN	GAS	T	ZZ	
92/04	ECAR		PA	APS	Schenley	80	ST	CUL	P	ZZ	
92/04	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-300[d]	UN	UNK	P	ZZ	
92/04	NPCC	NE	CT	NU	Wndsr Lcks Hydroelec Ltd.	2.8	HY	WAT	T	ZZ	
92/04	NPCC	NE	VT	VTGP	Winooski One Partnership	5	HY	WAT	T	ZZ	

---

[a] See page 151, footnote a.

[b] See page 151, footnote c.

[c] See page 151, footnote b.

[d] See page 152, footnote d.

Non-Utility Generator (NUG) Additions[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
92/04	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	200	UN	GAS	P	ZZ	
92/04	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	60	UN	GAS	T	ZZ	
92/04	SERC	FL	FL	FLPC	CFR BIO-GEN CORPORATION 1	74	UN	WD	P	ZZ	
92/04	SERC	VAC	UN	VIEP	JOHNSON GEN. SET 1	3	ST	WD	P	ZZ	
92/04	SERC	VAC	UN	VIEP	JOHNSON GEN. SET 2	3	ST	WD	P	ZZ	
92/04	SERC	VAC	UN	VIEP	JOHNSON GEN. SET 3	3	ST	WD	P	ZZ	
92/04	WSCC	RMP	CO	PSC	A.B. LATERAL	35	HY	WAT	T	ZZ	
92/04	WSCC	RMP	CO	PSC	LUDVIK AND POWERNET	32	CW	WH	T	ZZ	
92/04	WSCC	RMP	CO	PSC	SHAVANO FALLS	3	HY	WAT	T	ZZ	
92/05	MAAC		DE	DPLC	Star Enterprises - NUG	48[b]	ST	FO6	V	ZZ	
92/05	MAAC		PA	GPUS	Monroe Co. RR - NUG	6[c]	ST	REF	L	ZZ	
92/05	NPCC	NE	MA	CES	SEMASS Expansion	22.5	ST	REF	T	ZZ	
92/05	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	30	UN	REF	T	ZZ	
92/05	NPCC	NY	UN	COEN	NON-UTILITY GENERATORS	412	UN	GAS	L	ZZ	
92/05	SERC	VAC	UN	VIEP	BERMUDA HUNDRED	220	CC	NG	P	ZZ	
92/05	SERC	VAC	UN	VIEP	COMMONWEALTH COGEN	218	GT	NG	P	CG	
92/05	WSCC	CNV	NV	NEVP	QF MISCELLANEOUS	90	ZZ	UNK	P	ZZ	
92/06	MAAC		NJ	PSCO	Hudson County RRF - NUG	38	ST	REF	P	ZZ	
92/06	MAAC		PA	GPUS	Broad Top - NUG	15[c]	FB	CUL	L	ZZ	
92/06	MAIN	WUM	WI	WPS	COGENERATION	35	ST	NG	P	CG	
92/06	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	17	HY	WAT	L	ZZ	
92/06	SERC	FL	FL	FLPC	UNIVERSITY OF FLORIDA 1	3	CG	NG	P	CG	
92/06	SERC	FL	FL	FLPL	GENERAL PEAT 1	52	UN	ZZ	P	ZZ	
92/06	SERC	FL	FL	TALL	FLA. STATE UNIVERSITY	12.6	CC	NG	P	ZZ	
92/06	SERC	VAC	UN	VIEP	COMMONWEALTH COGEN	112	ST	COL	P	CG	
92/06	SPP	N	KS	KAGE	NUG	30	UN	UNK	P	ZZ	
92/06	WSCC	RMP	CO	PSC	HORSE MOUNTAIN POWER GEN	25	CG	BIT	T	CG	
92/07	MAAC		NJ	PSCO	Campbell Soup - NUG	112	CW	NG	L	ZZ	
92/07	MAAC		NJ	PSCO	Mercer County RRF - NUG	16	ST	REF	P	ZZ	
92/07	SERC	VAC	UN	VIEP	MULTRITRADE	76	ST	WD	P	ZZ	
92/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
92/07	WSCC	RMP	CO	PSC	SUNLAWN EASTSIDE	25	CG	BIT	T	CG	
92/08	MAAC		UN	GPUS	Non-Utility Generation	17.5[c]	UN	UNK	L	ZZ	
92/08	SERC	VAC	UN	VIEP	EMPORIA TES FACILITY	3	ST	WD	P	ZZ	
92/09	ECAR		PA	APS	Shannopin	80	ST	CUL	P	ZZ	
92/09	MAAC		UN	GPUS	Non-Utility Generation	82[c]	UN	UNK	L	ZZ	
92/09	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	44	UN	GAS	T	ZZ	
92/09	SERC	VAC	UN	VIEP	ULTRASYSTEMS - BUENA VISTA	57	ST	COL	P	ZZ	
92/10	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	37.5	UN	GAS	L	ZZ	
92/10	WSCC	CNV	CA	RDNG	UNKNOWN PEAKING	25	CG	ZZ	P	CG	
92/11	NPCC	NE	VT	VTGP	Ryegate - Decker Energy	18	ST	BIO	T	ZZ	
92/11	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	23	UN	REF	P	ZZ	
92/12	MAAC		PA	GPUS	Panther Creek - NUG	80[c]	FB	CUL	L	ZZ	
92/12	NPCC	NE	VT	VTGP	Bio-Energy Corp.	15	ST	BIO	T	ZZ	
92/12	NPCC	NE	VT	VTGP	Great Falls Hydro	0.4	HY	WAT	T	ZZ	
92/12	NPCC	NE	VT	VTGP	No. Springfield-Decker Energy	18	ST	BIO	T	ZZ	
92/12	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	30	UN	REF	P	ZZ	
92/12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	49	UN	GAS	T	ZZ	
92/12	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	119	UN	UNK	P	ZZ	
92/12	SERC	VAC	UN	VIEP	HOLLYWOOD COGEN	3	IC	OIL	P	CG	

[a] See page 151, footnote a.

[b] Delaware City #3 under new ownership.

[c] See page 151, footnote b.

Non-Utility Generator (NUG) Additions[a]

(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
92/12	SERC	VAC	UN	VIEP	I-95 LANDFILL	3	GT	GAS	P	ZZ	
92/12	SERC	VAC	UN	VIEP	RICHMOND LANDFILL	3	GT	GAS	P	ZZ	
92/12	SERC	VAC	UN	VIEP	SONOCO	3	ST	COL	P	ZZ	
92/12	SERC	VAC	UN	VIEP	SOUTH RIVER USED OIL	2	ST	OIL	P	ZZ	
SUBTOTAL						4253					
93/01	ECAR		MI	CP	MCV Contract	108	CA	NG	P	ZZ	
93/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
93/01	ECAR		UN	PSI	Unidentified	14	UN	UNK	P	ZZ	
93/01	MAAC		NJ	GPUS	Bergen Co. RR - NUG	80[b]	ST	REF	L	ZZ	
93/01	MAAC		UN	AECO	Small Power Producer 2	15	GT	NG	P	ZZ	
93/01	MAAC		UN	PSCO	Non-Utility Bids	100	UN	UNK	P	ZZ	
93/01	MAAC		UN	PSCO	Small QF's - NUG	20	UN	UNK	P	ZZ	
93/01	NPCC	NE	CT	NU	ARS Power 1	32.2	ST	BIO	T	ZZ	
93/01	NPCC	NE	CT	NU	Flagg/Uniroyal (CCF 3)	24	ST	BIO	T	ZZ	
93/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	2.8	HY	WAT	P	ZZ	
93/01	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	55	UN	COL	P	ZZ	
93/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	86[c]	ZZ	UNK	P	ZZ	
93/01	SERC	FL	FL	FLPC	COMM. COGENERATOR 09 (UNK)	0	CG	NG	P	CG	
93/01	SERC	FL	FL	FLPC	SOLID WASTE FACILITY 01	19	UN	REF	P	ZZ	
93/01	SERC	FL	FL	TAEC	HARDEE POWER STATION	220	CC	NG	P	ZZ	
93/01	SERC	FL	FL	TAEC	HARDEE POWER STATION	75	CT	NG	P	ZZ	
93/01	SERC	FL	FL	TAEC	REFUSE PLANT	8	UN	REF	P	ZZ	
93/01	WSCC	CNV	AZ	SDGE	QF COGENERATION	50	CG	NG	P	CG	
93/01	WSCC	CNV	CA	PG&E	QF COGENERATION 93	121	CG	UNK	P	CG	
93/01	WSCC	CNV	CA	PG&E	QF HYDRO 93	2	HY	WAT	P	ZZ	
93/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 93	6	ZZ	UNK	P	ZZ	
93/01	WSCC	CNV	NV	NEVP	QF MISCELLANEOUS	28	ZZ	UNK	P	ZZ	
93/03	MAAC		PA	GPUS	Interpower - NUG	80[b]	FB	CUL	L	ZZ	
93/03	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79	UN	GAS	T	ZZ	
93/04	WSCC	RMP	CO	PSC	WEST POWER 1	122	CG	NG	U	CG	
93/05	NPCC	NY	NY	CEHG	NON-UTILITY GENERATORS	4.5	HY	WAT	T	ZZ	
93/05	NPCC	NY	NY	COEN	BIDDING CAPACITY	200	UN	UNK	P	ZZ	
93/05	NPCC	NY	NY	ROGE	NON-UTILITY GENERATORS	55	UN	GAS	P	ZZ	
93/05	NPCC	NY	UN	COEN	NON-UTILITY GENERATORS	483	UN	GAS	L	ZZ	
93/06	SERC	VAC	UN	VIEP	BRASFIELD DAM	1	HY	WAT	P	ZZ	
93/06	WSCC	CNV	NV	NEVP	QF MISCELLANEOUS	170	ZZ	UNK	P	ZZ	
93/07	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	57	UN	GAS	T	ZZ	
93/07	SERC	FL	FL	FLPC	GENERAL PEAT RESOURCES 1	52	UN	PEA	P	ZZ	
93/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
93/07	WSCC	NWP	OR	PGE	MISC. RESOURCES	30	ZZ	UNK	P	ZZ	
93/09	WSCC	CNV	CA	SDGE	QF SOLAR	80	SO	SUN	P	ZZ	
93/10	NPCC	NS	NS	NSPC	NON-UTILITY GENERATOR	15	UN	UNK	P	ZZ	
93/11	NPCC	NB	NB	NBPO	WOOD UNIT #1	25	ST	WD	P	ZZ	
93/11	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	54.7	UN	GAS	T	ZZ	
93/12	ERCOT		TX	HL&P	OCCIDENTAL-NUG	-225[d]	GT	NG	P	ZZ	
93/12	NPCC	QUE	QB	HYQB	NON-UTILITY GENERATOR	55	UN	UNK	P	ZZ	
SUBTOTAL						2414					
94/01	ECAR		MI	CP	MCV Contract	109	CA	NG	P	ZZ	

---

[a] See page 151, footnote a.

[b] See page 151, footnote b.

[c] See page 151, footnote c.

[d] See page 152, footnote d.

Non-Utility Generator (NUG) Additions[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
94/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
94/01	MAAC		NJ	AECO	KCS - NUG 1	202	ST	BIT	T	ZZ	
94/01	MAAC		NJ	AECO	VMS - NUG 1	45	CT	NG	P	ZZ	
94/01	MAAC		UN	AECO	CCLP - NUG 1	230	ST	BIT	T	ZZ	
94/01	MAAC		UN	AECO	Small Power Producer 3	15	ST	BIT	P	ZZ	
94/01	MAAC		UN	PSCO	Non-Utility Bids	100	UN	UNK	P	ZZ	
94/01	MAAC		UN	PSCO	Small QF's - NUG	20	UN	UNK	P	ZZ	
94/01	NPCC	NE	CT	NU	Flagg/Perkin Elmer(CCF 2)Therm	0.85	CC	MUL	T	ZZ	
94/01	NPCC	NY	NY	LOIL	BIDDING CAPACITY	150	UN	UNK	P	ZZ	
94/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	73[b]	ZZ	UNK	P	ZZ	
94/01	SERC	FL	FL	TAEC	CITY OF TAMPA REFUSE	19.5	UN	REF	P	ZZ	
94/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG	
94/01	WSCC	CNV	CA	PG&E	QF COGENERATION 94	103	CG	UNK	P	CG	
94/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 94	5	ZZ	UNK	P	ZZ	
94/04	SERC	FL	FL	FLPC	GENERAL PEAT RESOURCES 2	52	UN	PEA	P	ZZ	
94/04	WSCC	RMP	CO	PSC	FT LUPTON COGEN	150	CG	NG	L	CG	
94/05	MAAC		UN	GPUS	Non-Utility Generation	325[c]	UN	UNK	P	ZZ	
94/05	NPCC	NY	NY	CEHG	BIDDING CAPACITY	30	UN	UNK	P	ZZ	
94/05	NPCC	NY	NY	NIMP	BIDDING CAPACITY	120	UN	UNK	P	ZZ	
94/05	NPCC	NY	NY	POAS	NON-UTILITY GENERATORS	122	UN	GAS	P	ZZ	
94/05	NPCC	NY	NY	ROGE	BIDDING CAPACITY	50	UN	UNK	P	ZZ	
94/06	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 02	8	UN	REF	P	ZZ	
94/06	SERC	VAC	UN	VIEP	BECKLEY COGEN	137	ST	COL	P	CG	
94/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
94/09	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79	UN	GAS	T	ZZ	
94/10	NPCC	NS	NS	NSPC	NON-UTILITY GENERATOR	15	UN	UNK	P	ZZ	
94/11	NPCC	NY	NY	NEYE	BIDDING CAPACITY	100	UN	UNK	P	ZZ	
94/11	NPCC	NY	NY	NIMP	BIDDING CAPACITY	230	UN	UNK	P	ZZ	
94/12	ERCOT		TX	HL&P	DOW CHEMICAL-NUG	-325[d]	GT	NG	P	ZZ	
SUBTOTAL						2178					
95/01	ECAR		MI	CP	MCV Contract	108	CA	NG	P	ZZ	
95/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
95/01	ECAR		UN	PSI	Unidentified	44	UN	UNK	P	ZZ	
95/01	MAAC		NJ	AECO	ACMUA - NUG 1	24	ZZ	REF	P	ZZ	
95/01	MAAC		UN	AECO	Small Power Producer 4	5	ST	BIT	P	ZZ	
95/01	MAAC		UN	PSCO	Small QF's -NUG	20	UN	UNK	P	ZZ	
95/01	NPCC	NY	NY	ORRU	BIDDING CAPACITY	140	UN	GAS	L	ZZ	
95/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	73[b]	ZZ	UNK	P	ZZ	
95/01	SERC	FL	FL	FLPC	GENERAL PEAT RESOURCES 3	52	UN	PEA	P	ZZ	
95/01	SERC	FL	FL	FLPC	P & G CELLULOSE 2	2	UN	WD	P	ZZ	
95/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 10 (UNK)	0	CG	NG	P	CG	
95/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 03	19	UN	REF	P	ZZ	
95/01	SERC	FL	FL	JACO	UNKNOWN 01	10	UN	UNK	P	ZZ	
95/01	WSCC		BC	BCHA	KEMANO 9-12	300	HY	WAT	P	ZZ	
95/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG	
95/01	WSCC	CNV	CA	PG&E	QF COGENERATION 95	36	CG	UNK	P	CG	
95/01	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 95	33	ZZ	UNK	P	ZZ	
95/01	WSCC	CNV	CA	SMUD	COGEN BASE LOAD	196	CG	UNK	P	CG	
95/03	ERCOT		TX	HL&P	BAYOU COGENERATION-NUG	-270[d]	GT	NG	P	CG	

---

[a] See page 151, footnote a.

[b] See page 151, footnote c.

[c] See page 151, footnote b.

[d] See page 152, footnote d.

Non-Utility Generator (NUG) Additions[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
95/04	WSCC	RMP	CO	PSC	COLO. POWER PROJECT #2	68	CG	NG	T	CG	
95/04	WSCC	RMP	CO	PSC	SILVER LAKE	2	HY	WAT	T	ZZ	
95/05	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	12	ST	GAS	L	ZZ	
95/05	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	40	UN	REF	L	ZZ	
95/06	SERC	FL	FL	FLPL	BECHTEL INDIANTOWN	300	CG	COL	P	CG	
95/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
95/07	WSCC	NWP	OR	PGE	MISC. RESOURCES	30	ZZ	UNK	P	ZZ	
95/10	ECAR		MD	APS	AES Cumberland	180	ST	COL	P	ZZ	
95/10	ECAR		UN	APS	PURPA 2	130	ST	COG	P	ZZ	
95/10	ECAR		UN	APS	PURPA Contingency	-25[b]	UN	UNK	P	ZZ	
95/12	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-77[c]	UN	UNK	P	ZZ	
SUBTOTAL						1464					
96/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
96/01	MAAC		NJ	AECO	CMCUA - NUG 1	12[d]	ZZ	REF	P	ZZ	
96/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	72[e]	ZZ	UNK	P	ZZ	
96/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 11 (UNK)	0	CG	NG	P	CG	
96/01	SERC	FL	FL	FLPL	IND. COGENERATOR 03	0	CG	NG	P	CG	
96/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY EXP. 01	37.5	UN	REF	P	ZZ	
96/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY EXP. 02	30	UN	REF	P	ZZ	
96/01	WSCC	AZN	AZ	APS	GENERIC COGEN 1	4	CG	UNK	P	CG	
96/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	3	CG	UNK	P	CG	
96/01	WSCC	CNV	CA	SMUD	COGEN BASE LOAD	49	CG	UNK	P	CG	
96/04	WSCC	RMP	CO	PSC	COLUMBINE POWER PROJ	80	ST	BIT	T	ZZ	
96/05	MAAC		UN	DPLC	Unidentified NUG	100	UN	UNK	P	ZZ	
96/06	SPP	N	KS	KAGE	NUG	30	UN	UNK	P	ZZ	
96/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
SUBTOTAL						428					
97/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
97/01	ECAR		UN	PSI	Unidentified	64	UN	UNK	P	ZZ	
97/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	75[e]	ZZ	UNK	P	ZZ	
97/01	SERC	FL	FL	FLPL	BIOMASS FACILITY 01	10	UN	WD	P	ZZ	
97/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 12 (UNK)	0	CG	NG	P	CG	
97/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 04	27	UN	REF	P	ZZ	
97/01	WSCC	AZN	AZ	APS	GENERIC COGEN 2	4	CG	UNK	P	CG	
97/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG	
97/01	WSCC	NWP	OR	PGE	MISC. RESOURCES	135	CG	UNK	P	CG	
97/06	MAIN	WUM	WI	WPS	COGENERATION	54	ST	COL	P	CG	
97/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
97/07	WSCC	NWP	OR	PGE	MISC. RESOURCES	30	ZZ	UNK	P	ZZ	
SUBTOTAL						411					
98/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
98/01	MAAC		NJ	AECO	SCMUA - NUG 1	6[d]	ZZ	REF	P	ZZ	
98/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	80	ZZ	UNK	P	ZZ	
98/01	SERC	FL	FL	FLPL	SOLID WASTE FACILITY EXP. 03	15	UN	REF	P	ZZ	
98/01	SERC	FL	FL	FLPL	SUGAR MILL 01	0	UN	ZZ	P	ZZ	
98/01	WSCC	AZN	AZ	APS	GENERIC COGEN 3	4	CG	UNK	P	CG	
98/01	WSCC	AZN	AZ	APS	REFUSE 1	10	ZZ	REF	L	ZZ	

---

[a] See page 151, footnote a.

[c] See page 152, footnote d.

[e] See page 151, footnote c.

[b] PURPA contingency to recognize that not all of the PURPA capacity will finally be developed.

[d] Incinerator with steam turbine.

Non-Utility Generator (NUG) Additions[a]
(January 1, 1990 – December 31, 1999)

In-Svc Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
98/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG	
98/05	SPP	WC	OK	OKGE	COGENERATOR - MCPC	100	GT	NG	P	CG	
98/06	ERCOT		TX	HL&P	AES DEEPWATER-NUG	-136[b]	ST	PC	P	ZZ	
98/06	MAIN	WUM	WI	WPS	COGENERATION	44	ST	COL	P	CG	
98/07	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	5	ZZ	UNK	P	ZZ	
SUBTOTAL						135					
99/01	ECAR		MI	DECO	Undesignated Number	5	ST	REF	P	ZZ	
99/01	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	86[c]	ZZ	UNK	P	ZZ	
99/01	SERC	FL	FL	FLPL	COMM. COGENERATOR 13 (UNK)	0	CG	NG	P	CG	
99/01	WSCC	AZN	AZ	APS	GENERIC COGEN 4	4	CG	UNK	P	CG	
99/01	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	3	CG	UNK	P	CG	
99/06	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-415[b]	UN	UNK	P	ZZ	
99/06	MAIN	WUM	WI	WPS	COGENERATION	27	ST	COL	P	CG	
99/09	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-74[b]	UN	UNK	P	ZZ	
SUBTOTAL						-364					
TOTAL						19969					

---

[a] See page 151, footnote a.

[b] See page 152, footnote d.

[c] See page 151, footnote c.

Jointly-Owned Generating Unit Additions[a]

(January 1, 1990 - December 31, 1999)

In-Svc Date	Region	Name	MW-S	Type	Fuel	Comments
90/01	WSCC	HYDROELEC. PROJ NO. ONE	200	HY	WAT	JOINT PLANT. OPERATOR: NCPA
90/10	WSCC	SHEERNESS 2	383	ST	SUB	OWNERSHIP: TAUC 50%, APL 50%
SUBTOTAL			583			
91/06	ECAR	W.H. Zimmer 1	1300[b]	ST	COL	CG&E(605MW),DP&L(365),AEP(330)
SUBTOTAL			1300			
93/12	SERC	Clover 1	196	ST	COL	VIEP(196MW),Non-SERC member(196)
SUBTOTAL			196			
94/05	SERC	PEAKING	39	GT	GAS	GEPC(19.5MW),SEAP(19.5)
94/05	SERC	PEAKING	40	GT	GAS	GEPC(20MW),SEAP(20)
94/12	SERC	Clover 2	196	ST	COL	VIEP(196MW),Non-SERC member(196)
SUBTOTAL			275			
95/05	SERC	PEAKING	63	GT	GAS	GEPC(31.5MW),SEAP(31.5)
95/05	SERC	PEAKING	63	GT	GAS	GEPC(31.5MW),SEAP(31.5)
SUBTOTAL			126			
96/01	ERCOT	SAN MIGUEL #2	200	ST	LIG	Reflects only ST&M'S portion of a 400 MW unit
SUBTOTAL			200			
97/05	SERC	PEAKING	31	GT	GAS	GEPC(23.25MW),SEAP(7.75)
97/05	SERC	PEAKING	95	GT	GAS	GEPC(71.25MW),SEAP(23.75)
SUBTOTAL			126			
98/05	SERC	PEAKING	32	GT	GAS	GEPC(24MW),SEAP(8)
98/05	SERC	PEAKING	94	GT	GAS	GEPC(70.5MW),SEAP(23.5)
SUBTOTAL			126			
99/03	SPP	IATAN 2	250	ST	SUB	KACP(250MW),Unknown(250)
SUBTOTAL			250			
Under Review[d]	ECAR	Perry 2	1182[c]	NB	UR	CEC(605MW),OE(416),DLCO(161)
TOTAL			4364	(3182)[c]		

Jointly-Owned Generating Unit Retirements[a]

(January 1, 1990 - December 31, 1999)

Ret Date	Region	Name	MW-S	Type	Fuel	Comments
96/01	SERC	GASTON A	16	CT	OIL	ALAP(8MW),GEPC(8)
			16			
TOTAL			16			

---

[a] Electric utility units only. Excludes non-utility generators (NUGs). See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] The owners of this plant, which has been under construction as a nuclear unit, announced on January 21, 1984 that the plant design will be converted from nuclear to coal-fired.

[c] Perry 2 was not counted as part of the owning utilities' or NERC's capacity during the ten-year forecast period. The unit is listed here for information only.

[d] Construction activity on Perry 2 has been suspended. Options with respect to the completion and timing of Perry 2 are being evaluated. A decision regarding the completion of the unit is not expected until all options have been evaluated.

Generating Unit Retirements (Utility and Non-Utility)[a]

(January 1, 1990 – December 31, 1999)

Ret Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
90/01	ECAR		MI	CP	Cobb 1	52	ST	COL	R	U	
90/01	ECAR		MI	CP	Cobb 2	52	ST	COL	R	U	
90/01	ECAR		MI	CP	Cobb 3	52	ST	COL	R	U	
90/05	MAAC		PA	GPUS	Williamsburg 5	32	ST	BIT	R	U	
90/06	SPP	N	KS	EMDE	RIVERTON 3,4	20	ST	NG	R	U	
90/06	WSCC	AZN	AZ	TEP	DEMOSS PETRIE 1	15	ST	NG	R	U	
90/06	WSCC	AZN	AZ	TEP	DEMOSS PETRIE 2	13	ST	NG	R	U	
90/10	MAAC		PA	GPUS	Front Street 1-3	90	ST	BIT	R	U	
90/10	MAAC		PA	GPUS	Front Street 4	28	ST	BIT	R	U	
90/10	WSCC		AB	CMH	MEDICINE HAT 4	3	ST	NG	R	U	
90/10	WSCC		AB	CMH	MEDICINE HAT 6	6	ST	NG	R	U	
90/10	WSCC		AB	EDMP	ROSSDALE 2-4	78	ST	NG	R	U	
90/UN	ASCC		AK	FBKS	CHENA 1,2,3	8.5	ST	SUB	R	U	
SUBTOTAL						450					
91/01	ERCOT		TX	AUST	SEAHOLM #5	18	ST	NG	R	U	
91/01	ERCOT		TX	AUST	SEAHOLM #6	18	ST	NG	R	U	
91/10	ECAR		OH	CG&E	Dicks Creek GT 3	14	GT	NG	R	U	
91/10	ECAR		OH	CG&E	Dicks Creek GT 4	15	GT	FO2	R	U	
91/10	ECAR		OH	CG&E	Miami Fort GT 2	48	GT	FO2	R	U	
91/10	ECAR		OH	CG&E	Miami Fort GT 3	14	GT	FO2	R	U	
91/10	ECAR		OH	CG&E	Miami Fort GT 4	14	GT	FO2	R	U	
91/11	NPCC	NE	CT	NU	BRANFORD 10	17.2[b]	JE	JF	R	U	
91/11	NPCC	NE	CT	NU	FRANKLIN DRIVE 10	17.2[b]	JE	JF	R	U	
91/11	NPCC	NE	CT	NU	TORRINGTON TERMINAL	17.2[b]	JE	JF	R	U	
91/11	NPCC	NE	CT	NU	TRACY GT	11.7[b]	GT	FO2	R	U	
91/11	NPCC	NE	CT	NU	TUNNEL JET 10	16.8[b]	JE	JF	R	U	
91/11	NPCC	NE	MA	NU	DOREEN 10	16.6[b]	JE	JF	R	U	
91/11	NPCC	NE	MA	NU	SILVER LAKE 10	11.3[b]	GT	FO2	R	U	
91/11	NPCC	NE	MA	NU	SILVER LAKE 11	14[b]	GT	FO2	R	U	
91/11	NPCC	NE	MA	NU	SILVER LAKE 12	12.6[b]	GT	FO2	R	U	
91/11	NPCC	NE	MA	NU	SILVER LAKE 13	14[b]	GT	FO2	R	U	
91/11	NPCC	NE	MA	NU	WOODLAND ROAD 10	16.6[b]	JE	JF	R	U	
91/UN	NPCC	NE	ME	BHE	Great Northern Paper	19.8	HY	WAT	R	ZZ	
SUBTOTAL						326					
92/03	NPCC	NE	MA	PMLP	WARREN STREET 1	2	IC	FO2	R	U	
92/03	NPCC	NE	MA	PMLP	WARREN STREET 2	2	IC	FO2	R	U	
92/03	NPCC	NE	MA	PMLP	WARREN STREET 3	2	IC	FO2	R	U	
92/03	NPCC	NE	MA	PMLP	WARREN STREET 4	3.5	IC	FO2	R	U	
92/03	SPP	SE	LA	CAJN	OPELOUSAS 1 & 2	34	ST	GAS	R	U	
92/05	MAAC		DE	DPLC	Delaware City 3	40	ST	FO6	R	U	
92/06	ASCC		AK	CEA	BERNICE 1	7.7	GT	NG	R	U	
92/07	MAPP		SA	SPC	ESTEVAN 2	9	ST	LIG	R	U	
92/07	MAPP		SA	SPC	ESTEVAN 3	13	ST	LIG	R	U	
92/07	MAPP		SA	SPC	ESTEVAN 4	19	ST	LIG	R	U	
92/07	WSCC	NWP	ID	USPN	MINIDOKA 1-5	6	HY	WAT	R	U	
92/09	NPCC	NE	CT	NU	DEVON 3	68[b,c]	ST	FO6	R	U	
92/09	NPCC	NE	CT	NU	DEVON 4	50[b,c]	ST	FO6	R	U	
92/10	ECAR		OH	CG&E	Dicks Creek GT 5	15	GT	FO2	R	U	

[a] See Appendix O for an explanation of the codes and abbreviations used in this appendix.

[b] Retirement may be deferred if additional capacity sales are made.

[c] Candidates for repowering in a combined cycle configuration.

Generating Unit Retirements (Utility and Non-Utility)[a]
(January 1, 1990 - December 31, 1999)

Ret Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
92/10	ECAR		OH	CG&E	Miami Fort GT 1	48	GT	FO2	R	U	
92/10	ECAR		OH	CG&E	Miami Fort GT 5	14	GT	FO2	R	U	
92/10	ECAR		OH	CG&E	Miami Fort GT 6	15	GT	FO2	R	U	
92/11	MAPP		MN	SMMP	FAIRMONT 5	12.2	ST	BIT	R	U	
92/11	SERC	FL	FL	JACO	Southside 1	26	ST	FO6	R	U	
SUBTOTAL						387					
93/01	NPCC	NE	MA	BECO	MDC Wachusett Dam	1.04	HY	WAT	R	ZZ	
93/01	SERC	FL	FL	JACO	Southside 2	0	ST	FO6	R	U	
93/05	MAAC		MD	DPLC	Easton 4	0.6	IC	FO2	R	U	
93/05	MAAC		MD	DPLC	Easton 5	0.8	IC	FO2	R	U	
93/05	MAAC		MD	DPLC	Easton 6	1.2	IC	FO2	R	U	
93/05	NPCC	NE	CT	NU	DEVON 5	48[b,c]	ST	FO6	R	U	
93/05	NPCC	NE	CT	NU	DEVON 6	68[b,c]	ST	FO6	R	U	
93/05	NPCC	NE	CT	NU	MIDDLETOWN 1	69[b,c]	ST	FO6	R	U	
93/06	WSCC	CNV	NV	NEVP	CLARK 5	70	GT	NG	R	U	
93/06	WSCC	CNV	NV	NEVP	CLARK 6	70	GT	NG	R	U	
93/11	NPCC	NB	NB	NBPO	CHATHAM #1	9.4	ST	FO6	R	U	
93/11	NPCC	NB	NB	NBPO	GRAND LAKE #5	4.8	ST	COL	R	U	
93/11	NPCC	NB	NB	NBPO	GRAND LAKE #6	4.8	ST	COL	R	U	
93/11	NPCC	NE	MA	CES	BLACKSTONE 1	13.5[d]	ST	FO6	R	U	
93/11	NPCC	NE	MA	CES	BLACKSTONE 3	0[d]	ST	FO6	R	U	
93/11	NPCC	NE	MA	CES	BLACKSTONE 4	2[d]	ST	FO6	R	U	
93/UN	ASCC		AK	SES	SEWARD 1	1.5	IC	FO2	R	U	
93/UN	ASCC		AK	SES	SEWARD 2	1.5	IC	FO2	R	U	
SUBTOTAL						367					
94/05	MAAC		MD	DPLC	Easton 7	2	IC	FO2	R	U	
94/06	ASCC		AK	CEA	BELUGA 4	8.1	GT	NG	R	U	
94/06	WSCC	CNV	NV	NEVP	CLARK 7	70	GT	NG	R	U	
94/06	WSCC	CNV	NV	NEVP	CLARK 8	70	GT	NG	R	U	
SUBTOTAL						150					
95/01	ERCOT		TX	AUST	SEAHOLM #7	14	ST	NG	R	U	
95/01	ERCOT		TX	AUST	SEAHOLM #8	14	ST	NG	R	U	
95/01	ERCOT		TX	TUEC	HANDLEY # 1	45	ST	NG	R	U	
95/01	ERCOT		TX	TUEC	HANDLEY # 2	80	ST	NG	R	U	
95/01	ERCOT		TX	TUEC	NORTH MAIN # 4	80	ST	NG	R	U	
95/01	ERCOT		TX	TUEC	PERMIAN BASIN DIESEL	1	IC	FO2	R	U	
95/01	ERCOT		TX	TUEC	TRINIDAD # 5	70	ST	NG	R	U	
95/01	NPCC	NE	MA	NEES	MDC Wachusetts Dam(Cosgrove)	1.05	HY	WAT	R	ZZ	
95/03	SPP	N	MO	KACP	GRAND AVE. 7	36	ST	NG	R	U	
95/03	SPP	N	MO	KACP	GRAND AVE. 9	43	ST	NG	R	U	
95/10	ECAR		OH	CG&E	Dicks Creek GT 1	92[e]	JE	NG	R	U	
95/10	ERCOT		TX	CP&L	LA PALMA #7	47	GT	NG	R	U	
95/10	WSCC		AB	APL	STURGEON 1-2	14	GT	NG	R	U	
SUBTOTAL						537					
96/01	ECAR		MI	DECO	Conners Crk 12 & 16	215[f]	ST	COL	R	U	
96/01	ERCOT		TX	TUEC	DALLAS # 9	70	ST	NG	R	U	

---

[a] See page 162, footnote a.

[b] See page 162, footnote b.

[c] See page 162, footnote c.

[d] Candidates for life extension.

[e] Turbine driven by exhaust gas of 10 jet engines.

[f] Conners Creek 12 removed from service when Conners Creek 15 is reactivated.

Generating Unit Retirements (Utility and Non-Utility)[a]

(January 1, 1990 – December 31, 1999)

Ret Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
96/01	ERCOT		TX	TUEC	DALLAS #3	75	ST	NG	R	U	
96/01	SERC	FL	FL	GAMW	J. R. Kelly 7	0	ST	NG	R	U	
96/01	SERC	SOU	AL	SOEG	GASTON A	16	CT	OIL	R	U	J
96/05	MAPP		NE	NPPD	DIESEL GROUP	3.7	IC	FO2	R	U	
96/05	SPP	SE	LA	LAFA	NATCHITOCHES 10	26	ST	NG	R	U	
96/05	SPP	SE	LA	LAFA	NATCHITOCHES 2	2	IC	NG	R	U	
96/05	SPP	SE	LA	LAFA	NATCHITOCHES 3	2	IC	NG	R	U	
96/05	SPP	SE	LA	LAFA	NATCHITOCHES 6	3	IC	NG	R	U	
96/05	SPP	SE	LA	LAFA	NATCHITOCHES 7	3	IC	NG	R	U	
96/05	SPP	SE	LA	LAFA	NATCHITOCHES 8	6	ST	NG	R	U	
96/05	SPP	SE	LA	LAFA	NATCHITOCHES 9	13	ST	NG	R	U	
96/06	ASCC		AK	CEA	IGT 1	13.8	GT	NG	R	U	
96/09	ECAR		WV	AEP	Philip Sporn 3	145	ST	COL	R	U	
96/09	ECAR		WV	AEP	Philip Sporn 4	145	ST	COL	R	U	
96/10	WSCC		AB	APL	SIMONETTE	12	GT	NG	R	U	
SUBTOTAL						751					
97/05	MAAC		MD	DPLC	Easton 8	2	IC	FO2	R	U	
97/06	ASCC		AK	CEA	IGT 2	13.8	GT	NG	R	U	
97/10	ECAR		OH	CG&E	Beckjord GT 1	46	GT	FO2	R	U	
97/10	ECAR		OH	CG&E	Beckjord GT 2	47	GT	FO2	R	U	
97/10	NPCC	NE	ME	CMP	Scott-SD Warren (Westbrook)	38.63	ST	WOD	R	ZZ	
97/12	ERCOT		TX	WETU	ABILENE #4	18	ST	NG	R	U	
97/12	ERCOT		TX	WETU	CONCHO #3	15	ST	NG	R	U	
97/12	ERCOT		TX	WETU	FT. STOCKTON #2	5	GT	NG	R	U	
97/12	ERCOT		TX	WETU	LAKE PAULINE #1	19	ST	NG	R	U	
SUBTOTAL						205					
98/01	ERCOT		TX	AUST	SEAHOLM #9	36	ST	NG	R	U	
98/01	ERCOT		TX	TUEC	MORGAN CREEK # 2	22	ST	NG	R	U	
98/01	ERCOT		TX	TUEC	MORGAN CREEK # 3	44	ST	NG	R	U	
98/01	ERCOT		TX	TUEC	MOUNTAIN CREEK # 2	33	ST	NG	R	U	
98/01	ERCOT		TX	TUEC	MOUNTAIN CREEK # 3	70	ST	NG	R	U	
98/01	MAAC		NJ	PSCO	Sewaren 1	104	ST	NG	R	U	
98/01	MAAC		NJ	PSCO	Sewaren 2	111	ST	NG	R	U	
98/01	SERC	FL	FL	GAMW	J. R. Kelly 2	14	GT	NG	R	U	
98/01	SERC	FL	FL	GAMW	J. R. Kelly 3	14	GT	NG	R	U	
98/06	ASCC		AK	CEA	IGT 3	16.7	GT	NG	R	U	
98/06	MAIN	WUM	WI	WPS	PULLIAM 3, 4	54	ST	BIT	R	U	
98/10	ECAR		OH	CG&E	Beckjord GT 3	47	GT	FO2	R	U	
98/10	ECAR		OH	CG&E	Beckjord GT 4	46	GT	FO2	R	U	
98/11	NPCC	NE	MA	MMWE	Carbalon (sterling Dsl #1)	0.33	IC	OIL	R	ZZ	
98/12	MAPP		MN	SMMP	LITCHFIELD 5	2	IC	NG	R	U	
98/12	MAPP		MN	SMMP	LITCHFIELD 6	2	IC	NG	R	U	
98/12	MAPP		MN	SMMP	PRINCETON 4	1	IC	FO2	R	U	
98/12	MAPP		MN	SMMP	PRINCETON 6	2.4	IC	FO2	R	U	
98/12	MAPP		MN	SMMP	REDWOOD FALLS SE 1	2.2	IC	NG	R	U	
98/12	MAPP		MN	SMMP	WELLS 4	2.4	IC	NG	R	U	
SUBTOTAL						624					

---

[a] See page 162, footnote a.

Generating Unit Retirements (Utility and Non-Utility)[a]

(January 1, 1990 - December 31, 1999)

Ret Date	Region	Subreg	St/Prov	Utility	Name	MW-S	Type	Fuel	Status	U/NU	Joint
99/01	MAAC		NJ	PSCO	Sewaren 3	107	ST	NG	R	U	
99/01	SERC	FL	FL	GAMW	J. R. Kelly 1	14	GT	NG	R	U	
99/01	SPP	SE	AR	MSES	HARVEY COUCH 1	30	ST	NG	R	U	
99/01	SPP	SE	MS	MSES	REX BROWN 1	36	ST	NG	R	U	
99/01	SPP	WC	OK	PSOK	TULSA 3	0[b]	ST	NG	R	U	
99/08	NPCC	NE	ME	CMP	Madison Abenaki Lower	6.65	HY	WAT	R	ZZ	
99/09	NPCC	NE	ME	CMP	Otis-International Paper Dam	9	HY	WAT	R	ZZ	
99/09	NPCC	NE	ME	CMP	Riley-International Paper Dam	5.35	HY	WAT	R	ZZ	
99/10	WSCC		AB	APL	BATTLE R 1-2	60	ST	SUB	R	U	
99/10	WSCC		AB	CMH	MEDICINE HAT 3	15	ST	NG	R	U	
99/12	MAIN	SCI	IL	CIPS	MEREDOSIA 1	62	ST	COL	R	U	
99/12	MAIN	SCI	IL	CIPS	MEREDOSIA 2	62	ST	COL	R	U	
99/12	NPCC	NE	ME	CMP	Madison Anson Upper	6.77	HY	WAT	R	ZZ	
99/12	SPP	SE	AR	MSES	LYNCH 2.	74	ST	NG	R	U	
SUBTOTAL						488					
TOTAL						4285[c]					

---

[a] See page 162, footnote a.

[b] Tulsa 3 is rated 85 MW, but it has not been included in existing capacity (Item 2A) and therefore should not be subtracted from net capacity (Item 3A).

[c] Includes 73 MW of unit retirements in ASCC, a NERC Affiliate member.

APPENDIX O Generating Unit Codes and Abbreviations

Codes and Abbreviations for Generating Unit Additions and Retirements (Appendixes D through N)

UNIT TYPE

ST	Steam Turbine-Non Nuclear
NB	Steam-BWR Nuclear
NP	Steam-PWR Nuclear
NH	Steam-HTGR Nuclear
CD	CANDU
IC	Internal Combustion
GT	Combustion Turbine (Gas Turbine)
HY	Conventional Hydro
PS	Pumped Storage Hydro
CW	Combined Cycle-Steam Portion-Waste Heat Only
CA	Combined Cycle-Steam Portion-Auxiliary Fired
CT	Combined Cycle-Combustion Turbine Portion
CC	Combined Cycle
IG	Integrated Coal Gasification Combined Cycle (IGCC)
CG	Cogeneration
JE	Jet Engine
FC	Fuel Cell
SO	Solar
WM	Wind Power
GE	Geothermal
ZZ	None of the above
UN	Unknown at this time
FB	Fluidized Bed Combustion
PB	Pressurized Fluidized Bed Combustion
AB	Atmospheric Fluidized Bed Combustion

CONSTRUCTION STATUS

P	Planned for installation, but not utility authorized
L	Regulatory approval pending, but not under construction
T	Regulatory approval received, but not under construction
U	Under construction, less than approximately 50% of plant completed
V	Under construction, greater than approximately 50% of plant completed
R	Planned for retirement

OWNERSHIP (Utility/Non-Utility)

U	Utility
CG	Non-utility Cogenerator
ZZ	Non-utility Small Power Producer and all other types of non-utility generators

FUEL TYPE

WH	Waste Heat
COL	Coal-General
BIT	Bituminous Coal
SUB	Sub-Bituminous Coal
ANT	Anthracite Coal
LIG	Lignite Coal
PC	Petroleum Coke
CUL	Culm or Coal Waste
LNG	Liquified Natural Gas
MTH	Methanol
GAS	Gas-General
NG	Natural Gas
RG	Refinery Gas
BFG	Blast Furnace Gas
COG	Coke Oven Gas
UNK	Unknown at this time
GST	Geothermal Steam
MUL	Multi-Fueled
REF	Refuse-Solid Waste
OIL	Oil-General
FO1	No.1 Fuel Oil
FO2	No.2 Fuel Oil
FO4	No.4 Fuel Oil
FO5	No.5 Fuel Oil
FO6	No.6 Fuel Oil
CRU	Crude Oil
TOP	Top Crude Oil
JF	Jet Fuel
KER	Kerosene
LPG	Liquid Propane Gas
RRO	Re-Refined Motor Oil
SNG	Synthetic Natural Gas
UR	Uranium
PL	Plutonium
WAT	Water
TH	Thorium
SUN	Sun
WND	Wind
G/C	Gas and/or Coal
O/C	Oil and/or Coal
W/G	Wood and/or Gas
W/O	Wood and/or Oil
WOD	Wood
WD	Wood and Wood Waste
BIO	Biomass
PEA	Peat
ZZ	None of the above

Generating Unit Codes and Abbreviations APPENDIX O

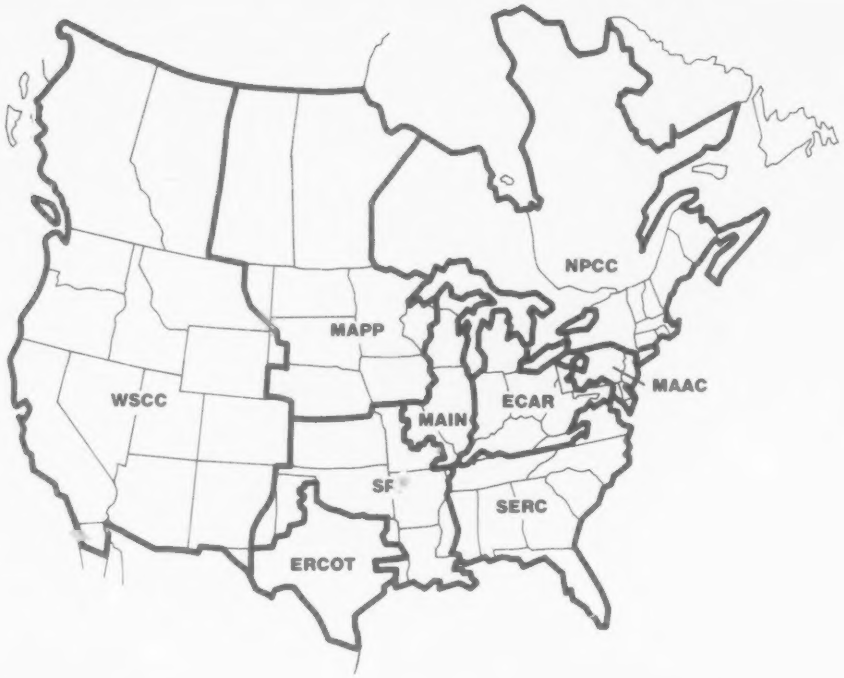
The codes and abbreviations used for the major headings in the generator unit listings in Appendixes D through N are as follows:

In-Svc Date — In-Service Date, Year/Month
Region — NERC Regional Reliability Council, see Appendix P
Subreg — Subregions of MAIN, NPCC, SERC, SPP, and WSCC, see Appendix P
ST/Prov — State (U.S.) or Province (Canada), two-character postal code
Utility — Utility abbreviations from regional IE-411 reports
Name — Generating unit name
MW-S — Summer rating of units in megawatts (MW)
Type — Unit type, see Appendix O
Fuel — Primary fuel type, see Appendix O
Status — Construction status of unit, see Appendix O
U/NU — Ownership of units: U (utility) and NU (non-utility), see Appendix O
Joint — Units identified by utilities as jointly-owned units, see Appendix M

APPENDIX P NERC Regions and Subregions

REGIONS	COUNTRY	SUBREGIONS
ECAR East Central Area Reliability Coordination Agreement	U.S.	None
ERCOT Electric Reliability Council of Texas	U.S.	None
MAAC Mid-Atlantic Area Council	U.S.	None
MAIN Mid-America Interconnected Network	U.S.	CE — **Cmnwlth Edison** — Commonwealth Edison Company Subregion
	U.S.	EM — **East Missouri** — East Missouri Subregion
	U.S.	SCI — **S Cent Illinois** — South Central Illinois Group
	U.S.	WUM — **Wis-Upper Mich** — Wisconsin-Upper Michigan Subregion
MAPP Mid-Continent Area Power Pool	U.S.	None
	CANADA	None
NPCC Northeast Power Coordinating Council	U.S.	NY — **New York** — New York Power Pool
	U.S.	NE — **NEPOOL** — New England Power Pool
	CANADA	NB — **New Brunswick** — New Brunswick Electric Power Commission
	CANADA	NS — **Nova Scotia** — Nova Scotia Power Corporation
	CANADA	ONT — **Ontario** — Ontario Hydro
	CANADA	QUE — **Québec** — Hydro-Québec
SERC Southeastern Electric Reliability Council	U.S.	[illegible] — **Florida** — Florida Subregion
	U.S.	[illegible] — **Southern** — Southern Subregion
	U.S.	T[illegible] — Tennessee Valley Authority Subregion
	U.S.	VAC — **VACAR** — Virginia-Carolinas Subregion
SPP Southwest Power Pool	U.S.	SE — **Southeast** — Western Mississippi, Southeastern Texas, Eastern Arkansas, Southeastern Missouri, and Louisiana
	U.S.	WC — **West Central** — Western Arkansas, the Texas Panhandle, Northeast Texas, and Oklahoma
	U.S.	N — **Northern** — Western Missouri and Kansas
WSCC Western Systems Coordinating Council	U.S.	NWP — **NW Pool** — Northwest Power Pool Area
	U.S.	RMP — **Rocky Mt Area** — Rocky Mountain Power Area
	U.S.	AZN — **Ariz-N.Mex** — Arizona-New Mexico Power Area
	U.S.	CNV — **Calif-So.Nev** — California-Southern Nevada Power Area
	CANADA	None
	MEXICO	None
ASCC (Affiliate Member) Alaska Systems Coordinating Council	U.S.	ASCC — Alaska Railbelt systems serving the Anchorage Bowl, the Fairbanks area, and the Kenai Peninsula

North American Electric Reliability Council



ECAR
East Central Area Reliability Coordination Agreement

ERCOT
Electric Reliability Council of Texas

MAAC
Mid-Atlantic Area Council

MAIN
Mid-America Interconnected Network

MAPP
Mid-Continent Area Power Pool

NPCC
Northeast Power Coordinating Council

SERC
Southeastern Electric Reliability Council

SPP
Southwest Power Pool

WSCC
Western Systems Coordinating Council

AFFILIATE

ASCC
Alaska Systems Coordinating Council

The North American Electric Reliability Council (NERC) was formed in 1968 by the electric utilities to promote the RELIABILITY of their generation and transmission systems. NERC consists of nine Regional Reliability Councils and one affiliate encompassing virtually all of the electric systems in the United States, Canada, and the northern portion of Baja California, Mexico.

RELIABILITY, in a bulk electric system, is the degree to which the performance of the elements of that system results in electricity being delivered to customers within accepted standards and in the amount desired. The degree of reliability may be measured by the frequency, duration, and magnitude of adverse effects on the electric supply (or service to customers).

Bulk electric system reliability can be addressed by considering two basic and functional aspects of the bulk electric system — adequacy and security.

ADEQUACY is the ability of the bulk electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, taking into account scheduled and unscheduled outages of system components.

SECURITY is the ability of the bulk electric system to withstand sudden disturbances such as electric short circuits or unanticipated loss of system components.

North American
Electric
Reliability
Council

101 COLLEGE ROAD EAST
PRINCETON, NEW JERSEY 08540-6601

609-452-8060

A8630.2-D

Electricity
Supply & Demand
1991-2000

Annual Summary of Electric Utility Supply & Demand Projections

North American
Electric
Reliability
Council

Electricity

Supply & Demand

1991-2000

Annual Summary of Electric Utility Supply & Demand Projections

July 1991

Copyright © 1991 by North American Electric Reliability Council. All rights reserved.

Table of Contents

Introduction — *Table No.*

Electricity Demand

- Peak Demand (Summer/Winter) 1
- Direct Control Load Management and Interruptible Demand (Summer/Winter) 2
- Annual Net Energy for Load 3

Electricity Generating Capacity

- Planned Capacity Resources (Summer/Winter) 4
- Capacity Margins (Summer/Winter) 5
- Generating Capacity by Fuel (Summer/Winter) 6
- Generating Capacity by Region (Summer/Winter) 7
  - Coal-Fired 8
  - Nuclear 9
  - Hydro 10
  - Pumped Storage 11
  - Geothermal 12
  - Oil-Fired
    - Total 13
    - Steam 14
    - Combustion Turbine 15
    - Combined Cycle 16
  - Gas-Fired
    - Total 17
    - Steam 18
    - Combustion Turbine 19
    - Combined Cycle 20
  - Dual Fuel-Fired
    - Total 21
    - Steam 22
    - Combustion Turbine 23
    - Combined Cycle 24
  - Other (Utility) 25
  - Non-Utility Generator 26

Electricity Production (Annual)

- Electricity Production by Fuel 27
- Electricity Production by Region 28
  - Coal 29
  - Nuclear 30
  - Hydro 31
  - Geothermal 32
  - Oil
    - Total 33
    - Steam 34
    - Combustion Turbine 35
    - Combined Cycle 36
  - Gas
    - Total 37
    - Steam 38
    - Combustion Turbine 39
    - Combined Cycle 40
  - Other (Utility) Fuels 41
  - Non-Utility Generators 42
- Pumped Storage Input (Load) 43
- Pumped Storage Output (Generation) 44
- Net Electricity Imports 45

Table of Contents (cont.)

Fossil Fuel Requirements (Annual)

Coal Requirements by Type 46
Coal Requirements by Region 47
  Western Lignite 48
  Western Coal 49
  Other Coal 50

Oil Requirements by Type 51
Oil Requirements by Region 52
  Distillate Oil
    Total 53
    Steam 54
    Combustion Turbine 55
    Combined Cycle 56
  Residual Oil
    Total 57
    Steam 58
    Combustion Turbine 59
    Combined Cycle 60
  Crude Oil 61

Natural Gas Requirements by Type 62
Natural Gas Requirements by Region 63
  Firm Gas
    Total 64
    Steam 65
    Combustion Turbine 66
    Combined Cycle 67
  Interruptible Gas
    Total 68
    Steam 69
    Combustion Turbine 70
    Combined Cycle 71

Generating Unit Additions and Retirements

Utility Additions
  Coal-Fired 72
  Nuclear 73
  Hydro 74
  Pumped Storage 75
  Oil-Fired 76
  Gas-Fired 77
  Other (Utility) 78
Non-Utility Additions 79
Jointly-Owned Additions (Utility and Non-Utility) 80

Retirements (Utility and Non-Utility) 81

Transmission Lines (230 kV and Above)

Existing (December 31, 1990) 82
1991-1995 Planned Additions 83
1996-2000 Planned Additions 84
Existing and Planned (December 31, 2000) 85

Appendixes

A — Generating Unit Codes and Abbreviations
B — Utility Abbreviations
C — NERC Region and Subregion Abbreviations

Introduction

About This Report

The North American Electric Reliability Council's (NERC) *Electricity Supply & Demand 1991-2000* summarizes the electricity supply and demand projections of the electric utilities that comprise NERC's nine Regional Reliability Councils and one affiliate.

The projections, made by electric utilities and assembled by the Regional Councils, generally reflect conditions as of January 1, 1991. Data on peak demands, direct control load management and interruptible demand, net energy for load, capacity resources, capacity margins, and planned additions and retirements of generating units are taken from the April 1, 1991 coordinated bulk power supply program (IE-411) reports submitted to the U.S. Department of Energy by the Councils. Data on generating capacity, electricity production, fossil fuel requirements, and existing and planned additions of transmission lines are reported by the Councils directly to NERC.

United States	Utilities in the lower 48 states.
Canada	Utilities in MAPP, NPCC, and WSCC Regions that serve Canada.
Mexico	That part of the Comision Federal de Electricidad system in northern Baja California, Mexico that is interconnected with United States electric utilities in WSCC.
ASCC	The Alaska Systems Coordinating Council (ASCC) representing the nine interconnected systems commonly known as the Alaska Railbelt Electric Utility Systems, which account for 75% of the electric utility generation in Alaska.

Areas served by the nine Regional Reliability Councils are shown on the inside back cover of this report. Data are generally reported by Region and subregion, with totals for the United States, Canada, Mexico, and ASCC. The Regional and subregional abbreviations are defined in Appendix C.

The *Electricity Supply and Demand 1991-2000* is a companion report to NERC's *Reliability Assessment 1991-2000* and provides the detailed background data on which the *Assessment* is based.

Questions may be directed to the NERC office, (609) 452-8060.

Electricity Demand

Actual Peak Demand 1980-90

Summer peak demand in the United States increased by 118,000 MW (21.7%) between 1980 and 1990, while winter peak in Canada increased by 24,000 MW (31.3%) (Figures 1 and 2). Peak demand increased over this period at average annual growth rates of 2.5% (United States) and 3.8% (Canada). These data are based on actual metered peak demands that have not been adjusted for extreme weather effects or emergency demand reductions at the time of peak.

Peak Demand Projections 1991-2000

The aggregated summer peak demand for the United States is projected to increase by almost 100,000 MW over the 1991-2000 period — an average annual growth rate of 1.9%. This forecast is slightly lower in terms of both MW demand and growth rate than reported last year. For Canada, the aggregated winter peak demand is projected to increase by about 16,000 MW — an average annual growth rate of 2.0%. This forecast is slightly higher in terms of MW demand but slightly lower in growth rate than reported last year.

Figure 1
U.S. Summer Peak Demand

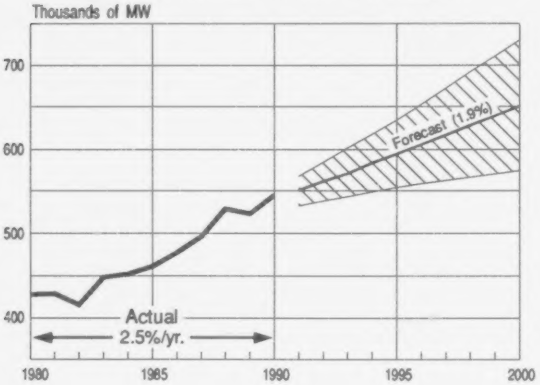
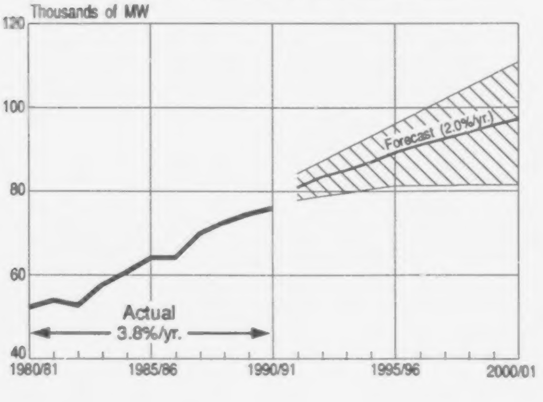


Figure 2
Canada Winter Peak Demand



Peak demands reported in Tables 1S and 1W are taken from Item 3A, Line 03 of the April 1, 1991 Regional Council IE-411 reports.

Coincident Versus Noncoincident Demand

The peak demands of individual electric utilities in a Region or subregion may occur in different months within a given season. The Regional and subregional demands in this report range from coincident hourly peak demands to noncoincident seasonal peak demands.

In some cases, the sum of subregional data may not equal Regional totals due to subregional demand diversity.

The majority of the Regional data represent noncoincident seasonal peaks. The peak demands for the United States and Canada are aggregates of noncoincident seasonal peak demands.

Direct Control Load Management and Interruptible Demand

Utilities are projecting expanded use of direct control load management and interruptible demand. In the United States, these programs are projected to increase from 14,100 MW in the summer of 1991 to 20,900 MW in 2000, and in Canada from 2,400 MW in the winter of 1991/92 to 2,800 MW in 2000/01.

Direct Control Load Management and Interruptible Demand reported in Tables 2S and 2W are taken from Item 3A, Lines 04 and 05 of the April 1, 1991 IE-411 reports.

Actual Net Energy for Load 1980-90

Net Energy for Load (NEL) increased by 594 billion kWh (22.2%) between 1980 and 1990 in the United States and by 132 billion kWh (31.4%) in Canada. NEL increased over this period at average annual growth rates of 2.3% (United States) and 3.8% (Canada).

Net Energy for Load Projections 1991-2000

NEL for the United States is projected to increase by more than 560 billion kWh over the 1991-2000 period — an average annual growth rate of 2.0%. This forecast is slightly lower in terms of both kWh demand and growth rate than reported last year. For Canada, NEL is projected to increase by over 100 billion kWh — an average annual growth rate of 2.3%. This forecast is also slightly lower in terms of both kWh demand and growth rate than reported last year.

NEL reported in Table 3 is taken from Item 1, Line 09 of the April 1, 1991 IE-411 reports.

Forecast Uncertainty

The projections of peak demand and NEL for the United States and Canada are aggregates of the forecasts of the individual utilities comprising the Regional Reliability Councils. These individual utility forecasts are generally "equal probability" forecasts that represent the midpoints of probabilistic distributions of forecast values. That is, there is a 50% chance that these forecasts will be exceeded and a 50% chance that they will not be reached.

To provide a better understanding of the aggregated projections and to illustrate the uncertainty inherent in the forecasting process, an estimated 80% probability band is shown around the base projections for the United States and Canada in Figures 1 and 2, respectively. The chances that demand will either exceed the upper bound or be less than the lower bound are each 10%. The probability that future demands for the United States and Canada will fall within their respective bands is 80%.

Definitions

Demand — The instantaneous electric power requirement of a power system, usually expressed in megawatts (MW).

Total Internal Demand (Peak Demand) — The peak hour integrated megawatt demand defined as the sum of the demands of all customers that a system serves, including the demands of the organization providing the electric service, plus the losses incidental to that service. Total Internal Demand is the sum of the metered (net) outputs of all generators within the system and the metered line flows into the system, less the metered line flows out of the system. Standby Demand is included in Total Internal Demand but the demand of station service or auxiliary needs (such as fan motors, pump motors, and other equipment essential to operation of the generating units) is not included. Total Internal Demand reflects the expected effects of utility indirect Demand Side Management programs such as conservation programs, improvements in efficiency of electric energy use, rate incentives, and rebates. It is not reduced by utility Direct Control Load Management or Interruptible Demand.

Standby Demand — The demand specified by contractual arrangement with a customer to provide power and energy to that customer as a secondary source or backup for the outage of the customer's primary source. Standby Demand is intended to be used infrequently by any one customer.

Direct Control Load Management — The magnitude of customer demand that can be interrupted at the time of seasonal peak by direct control of the System Operator by interrupting power supply to individual appliances or equipment on customer premises. This type of control, where used by utilities usually involves residential customers. Direct Control Load Management as defined here does not include Interruptible Demand.

Interruptible Demand — The magnitude of customer demand that, in accordance with contractual arrangements, can be interrupted at the time of seasonal peak by direct control of the System Operator or by action of the customer at the direct request of the System Operator. In some instances the demand reduction may be effected by direct action of the System Operator (remote tripping) after notice to the customer in accordance with contractual provisions. For example, demands that can be interrupted to fulfill planning or operating reserve requirements normally are reported as Interruptible Demand. Interruptible Demand as defined here does not include Direct Control Load Management.

Summer/Winter Peak Periods — For the purpose of this report, the summer peak period begins June 1 and extends through September 30, and the winter peak period begins December 1 and extends through March 31 of the following year. For instance, winter 1992 begins December 1, 1992 and extends through March 31, 1993. It is convenient to describe the winter peak period by means of two years. Thus, the winter referred to here would be winter 1992/93.

Net Energy for Load (NEL) — The electric energy requirements of a system, defined as system net generation plus energy received from others less energy delivered to others. It includes system losses but excludes energy required for the filling of reservoirs at pumped storage plants.

Average Annual Growth Rate (AAGR) — The average annual rates calculated for the weather normalized projections over the nine years from the first (1991) to the tenth (2000) year of the forecast period.

Table 1S

Peak Demand - Summer - MW

	Actual	Projected										AAGR
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	(%)
United States												
ECAR	79258	80206	81517	83019	84406	85835	87210	88639	90031	91433	92804	1.6
ERCOT	42737	43264	44214	45226	46010	46817	47943	48783	49906	51089	52405	2.2
MAAC[a,b]	42613	43341	44040	44689	45329	45889	46588	47285	47966	48653	49321	1.4
MAIN	40740	41309	42053	42769	43460	44126	44830	45614	46408	47198	47962	1.7
Cmnwlth Edison	17272	17600	17950	18300	18650	19000	19400	19800	20200	20600	21000	2.0
East Missouri	7256	7230	7324	7408	7503	7587	7681	7775	7870	7954	8048	1.2
S Cent Illinois	7398	7430	7599	7713	7859	7979	8048	8165	8300	8446	8577	1.6
Wis-Upper Mich	8814	9049	9180	9348	9448	9560	9701	9874	10038	10198	10337	1.5
MAPP-US	24994	25329	25671	26012	26307	26619	27037	27472	27918	28373	28863	1.5
NPCC-US	44116	46409	46372	46662	46904	47184	47644	48172	48717	49365	49965	0.8
New York	24985	26440	26640	26860	27080	27290	27490	27680	27870	28040	28190	0.7
NEPOOL	19131	19969	19732	19802	19824	19894	20154	20492	20847	21325	21775	1.0
SERC	121149	124782	128397	132350	135834	139580	143055	146586	149995	153279	156442	2.5
Florida	27266	28652	29441	30123	30921	31876	32594	33343	34093	34751	35602	2.4
Southern	30995	31156	32055	32920	33816	34644	35430	36225	37031	37798	38393	2.3
TVA	22595	22419	22922	23867	24667	25540	26246	27047	27855	28655	29457	3.1
VACAR	41087	42555	43979	45440	46430	47520	48785	49971	51016	52075	52990	2.5
SPP	52541	52169	53070	54330	55319	56328	57409	58541	59654	60815	61975	1.9
Southeast	22452	21985	22192	22753	23096	23332	23695	24023	24431	24885	25344	1.6
West Central	17399	17194	17573	17949	18282	18716	19098	19557	19940	20314	20681	2.1
Northern	12690	12990	13305	13628	13941	14280	14616	14961	15283	15616	15950	2.3
WSCC-US	97389	94710	96868	98422	100386	102186	103978	105716	107577	109464	111403	1.8
NW Power Pool	29306	28839	29378	29819	30127	30458	30793	31176	31511	31847	32226	1.2
Rocky Mtn	6427	6638	6885	7031	7182	7347	7499	7682	7854	8055	8214	2.4
Ariz-N. Mex	12553	12960	13265	13210	13567	13862	14155	14452	14753	15071	15420	1.9
Calif-So. Nev	49368	46438	47530	48452	49572	50622	51623	52510	53541	54563	55645	2.0
TOTAL(U.S.)	545537	551519	562202	573479	583955	594564	605694	616808	628172	639669	651140	1.9
Canada												
MAPP-CAN	4329	4504	4644	4771	4929	5068	5205	5317	5452	5565	5688	2.6
NPCC-CAN	39907	41244	42378	43491	44237	45221	46311	47118	47745	48672	49304	2.0
New Brunswick	1483	1716	1734	1788	1848	1899	1957	2016	2075	2134	2195	2.8
Nova Scotia	1248	1399	1440	1479	1518	1558	1599	1641	1683	1725	1770	2.6
Ontario	20408	20107	20877	21301	21698	22207	22627	22975	23227	23461	23717	1.9
Quebec	16768	18022	18327	18923	19173	19557	20128	20486	20760	21352	21622	2.0
WSCC-CAN	11530	11915	12198	12408	12727	13092	13313	13598	13906	14135	14412	2.1
TOTAL(Canada)	55766	57663	59220	60670	61893	63381	64829	66033	67103	68372	69404	2.1
Mexico												
WSCC-MEX	870	930	1016	1098	1187	1293	1393	1501	1618	1745	1882	8.1
NERC-Total	602173	610112	622438	635247	647035	659238	671916	684342	696893	709786	722426	1.9
ASCC	463	474	480	489	500	506	512	522	529	537	544	1.5

[a] Peak demands are coincident.

[b] Direct Control Load Management and Interruptible Demand already subtracted.

Table 1W

Peak Demand - Winter - MW

	Actual	Projected										AAGR
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	(%)
United States												
ECAR	67097	74981	76580	78019	79389	80672	81972	83289	84626	85957	87268	1.7
ERCOT	35815	35718	36895	37862	38664	39722	40681	41715	42838	44079	45386	2.7
MAAC[a,b]	36551	38481	39165	39932	40683	41493	42329	43125	43932	44725	45492	1.9
MAIN	32461	33668	34382	35035	35672	36330	36982	37720	38473	39191	39923	1.9
Cmnwlth Edison	13260	13890	14160	14430	14710	15020	15320	15630	15940	16250	16560	2.0
East Missouri	5676	5880	6014	6148	6282	6416	6550	6704	6837	6981	7115	2.1
S Cent Illinois	5815	6030	6187	6330	6451	6550	6637	6771	6916	7044	7173	1.9
Wis-Upper Mich	7710	7868	8021	8127	8229	8344	8475	8615	8780	8916	9075	1.6
MAPP-US	21113	21479	21959	22319	22629	22979	23377	23760	24152	24565	25023	1.7
NPCC-US	40545	43240	43327	43726	44061	44430	44921	45342	46022	46666	47171	1.0
New York	21886	23740	23920	24230	24480	24760	25000	25220	25470	25710	25900	1.0
NEPOOL	18659	19500	19407	19496	19581	19670	19921	20122	20552	20956	21271	1.0
SERC	117231	122616	125907	129271	132508	135789	139066	142305	145717	148949	151927	2.4
Florida	30800	32138	33267	34364	35431	36468	37498	38520	39529	40535	41552	2.9
Southern	24416	24971	25576	26161	26757	27404	28042	28693	29316	29814	30394	2.2
TVA	20937	22910	23344	23801	24330	24692	25167	25645	26116	26589	27232	1.9
VACAR	41295	42597	43720	44945	45990	47225	48359	49447	50756	52011	52749	2.4
SPP	38949	39567	40512	41497	42321	43217	44175	45159	46137	47107	48082	2.2
Southeast	16731	16911	17269	17686	17929	18173	18514	18846	19220	19598	19979	1.9
West Central	12886	13012	13372	13679	14009	14408	14774	15162	15520	15858	16194	2.5
Northern	9332	9644	9871	10132	10383	10636	10887	11151	11397	11651	11909	2.4
WSCC-US	94252	91295	93427	94834	96392	97994	99775	101277	103065	104843	106469	1.7
NW Power Pool	40935	37313	37843	38379	38739	39157	39621	40051	40506	40982	41478	1.2
Rocky Mtn	6787	6660	6867	7016	7175	7344	7520	7681	7862	8040	8208	2.3
Ariz-N. Mex	9440	10075	10739	11043	11355	11605	11866	12130	12391	12673	12966	2.8
Calif-So. Nev	37090	37270	38034	38445	39244	40015	40884	41522	42398	43227	43921	1.8
TOTAL(U.S.)	484014	501045	512154	522495	532319	542626	553278	563692	574962	586082	596741	2.0
Canada												
MAPP-CAN	5930	6116	6319	6467	6640	6795	6930	7080	7197	7324	7476	2.3
NPCC-CAN	55032	59675	61649	62733	64013	65683	67033	68058	69074	70334	71343	2.0
New Brunswick	2637	2723	2789	2884	2985	3072	3163	3252	3339	3423	3506	2.8
Nova Scotia	1827	1922	1978	2033	2086	2141	2189	2237	2291	2346	2403	2.5
Ontario	23046	24959	25551	26065	26671	27269	27920	28268	28603	28914	29293	1.8
Quebec	27522	30071	31331	31751	32271	33201	33761	34301	34841	35651	36141	2.1
WSCC-CAN	15127	15135	15485	15827	16189	16683	16994	17290	17676	17983	18318	2.1
TOTAL(Canada)	76089	80926	83453	85027	86842	89161	90957	92428	93947	95641	97137	2.0
Mexico												
WSCC-MEX	571	655	709	766	835	899	968	1044	1126	1215	1310	8.0
NERC-Total	560674	582626	596316	608288	619996	632686	645203	657164	670035	682938	695188	2.0
ASCC	613	625	633	647	658	669	676	687	698	709	718	1.6

[a] Peak demands are coincident.

[b] Direct Control Load Management and Interruptible Demand already subtracted.

Table 2S

Direct Control Load Management and Interruptible Demand - Summer - MW

					Projected					
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States										
ECAR	836	862	1095	1135	1327	1362	1397	1431	1462	1493
ERCOT	1349	1395	1524	1399	1139	1176	1211	1245	1280	1313
MAAC[a]	1388	1584	1768	1896	1979	2061	2145	2212	2281	2342
MAIN	843	898	980	1016	1066	1113	1160	1272	1307	1374
Cmnwlth Edison	150	179	183	187	192	197	202	209	215	222
East Missouri	194	196	204	210	218	227	237	317	325	368
S Cent Illinois	225	224	230	236	259	280	304	322	335	350
Wis-Upper Mich	274	299	363	383	397	409	417	424	432	434
MAPP-US	1274	1434	1628	1798	1941	2060	2162	2253	2342	2423
NPCC-US	393	442	508	575	540	536	543	549	542	577
New York	300	340	400	460	420	410	410	410	400	430
NEPOOL	93	102	108	115	120	126	133	139	142	147
SERC	3727	4160	4475	4965	5351	5719	5869	6103	6176	6553
Florida	1490	1741	1895	2054	2247	2414	2527	2571	2608	2638
Southern	488	617	750	1001	1110	1141	1194	1213	1237	1254
TVA	778	716	651	627	627	637	647	657	667	676
VACAR	971	1086	1179	1283	1367	1527	1501	1662	1664	1985
SPP	615	588	621	648	700	796	919	1024	1057	1088
Southeast	177	175	175	175	200	268	340	416	416	416
West Central	169	117	125	128	129	130	131	132	133	135
Northern	269	296	321	345	371	398	448	476	508	537
WSCC-US	3658	3768	3494	3546	3574	3560	3584	3635	3696	3689
NW Power Pool	1294	1249	1211	1185	1186	1175	1175	1175	1176	1176
Rocky Mtn	226	236	240	243	247	251	260	269	277	280
Ariz-N. Mex	730	775	481	480	478	465	463	466	466	467
Calif-So. Nev	1444	1531	1563	1639	1665	1669	1686	1728	1781	1769
TOTAL(U.S.)	14083	15131	16093	16978	17617	18383	18990	19724	20143	20852
Canada										
MAPP-CAN	158	162	162	162	162	162	162	162	162	162
NPCC-CAN	1819	1980	2040	2086	2131	2190	2209	2220	2232	2245
New Brunswick	72	72	72	72	72	72	72	72	72	72
Nova Scotia	150	161	163	165	169	171	174	176	179	181
Ontario	747	747	755	749	740	747	763	772	781	792
Quebec	850	1000	1050	1100	1150	1200	1200	1200	1200	1200
WSCC-CAN	171	209	241	228	236	252	252	265	274	291
TOTAL(Canada)	2148	2351	2443	2476	2529	2604	2623	2647	2668	2698
Mexico										
WSCC-MEX	0	0	0	0	0	0	0	0	0	0
NERC-Total	16231	17482	18536	19454	20146	20987	21613	22371	22811	23550
ASCC	2	3	4	5	5	5	5	5	5	5

---

[a] Direct Control Load Management and Interruptible Demand already subtracted from the peak demands in Table 1S.

Direct Control Load Management and Interruptible Demand - Winter - MW

	Projected									
	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
United States										
ECAR	829	1007	1029	1212	1236	1260	1288	1310	1335	1363
ERCOT	1390	1518	1391	1130	1166	1199	1232	1265	1297	1329
MAAC[a]	890	1078	1140	1190	1222	1252	1277	1298	1313	1328
MAIN	858	911	998	1025	1055	1085	1118	1219	1237	1291
Cmnwlth Edison	150	179	183	187	192	197	202	209	215	222
East Missouri	193	194	201	206	213	222	232	312	320	363
S Cent Illinois	231	238	245	251	258	266	277	283	285	289
Wis-Upper Mich	284	300	369	381	392	400	407	415	417	417
MAPP-US	604	658	715	767	817	861	905	938	981	1020
NPCC-US	340	377	426	471	489	507	521	527	531	562
New York	140	170	210	250	260	270	280	280	280	310
NEPOOL	200	207	216	221	229	237	241	247	251	252
SERC	4428	4837	5292	5788	6216	6426	6680	6750	7136	7109
Florida	2057	2316	2530	2777	2975	3188	3259	3317	3370	3430
Southern	544	675	849	1040	1122	1165	1202	1224	1244	1258
TVA	604	547	527	527	536	545	554	563	571	576
VACAR	1223	1299	1386	1444	1583	1528	1665	1646	1951	1845
SPP	422	427	432	437	447	457	472	487	502	517
Southeast	175	175	175	175	175	175	175	175	175	175
West Central	73	73	73	73	73	73	73	73	73	73
Northern	174	179	184	189	199	209	224	239	254	269
WSCC-US	2291	2649	2625	2615	2598	2604	2610	2617	2622	2625
NW Power Pool	1248	1220	1194	1181	1173	1173	1173	1174	1174	1174
Rocky Mtn	192	220	224	227	231	235	243	252	258	262
Ariz-N. Mex	376	772	770	788	787	773	772	771	753	772
Calif-So. Nev	460	462	463	464	465	465	466	466	467	467
TOTAL(U.S.)	12052	13462	14048	14635	15246	15651	16103	16411	16954	17144
Canada										
MAPP-CAN	148	152	152	152	152	152	152	152	152	152
NPCC-CAN	1945	2004	2050	2096	2155	2173	2183	2195	2207	2218
New Brunswick	72	72	72	72	72	72	72	72	72	72
Nova Scotia	161	163	165	169	171	174	176	179	181	184
Ontario	712	719	713	705	712	727	735	744	754	762
Quebec	1000	1050	1100	1150	1200	1200	1200	1200	1200	1200
WSCC-CAN	299	331	318	326	348	348	361	370	387	418
TOTAL(Canada)	2392	2487	2520	2574	2655	2673	2696	2717	2746	2788
Mexico										
WSCC-MEX	0	0	0	0	0	0	0	0	0	0
NERC-Total	14444	15949	16568	17209	17901	18324	18799	19128	19700	19932
ASCC	2	3	4	5	5	5	5	5	5	5

[a] Direct Control Load Management and Interruptible Demand already subtracted from the peak demands in Table 1W.

Table 3

Annual Net Energy for Load - Millions kWh

	Actual	Projected										AAGR
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	(%)
United States												
ECAR	442507	454286	463776	471821	480075	488166	496380	504329	511797	519777	527711	1.7
ERCOT	209789	213795	219578	225851	230814	235935	242652	248159	254749	261622	269525	2.6
MAAC	221099	227983	234970	239701	243637	247553	252343	256659	261031	265404	270005	1.9
MAIN	197326	200678	205169	209127	212889	216563	220492	224791	229143	233588	237909	1.9
Cmnwlth Edison	78745	78400	79950	81550	83200	84850	86550	88300	90050	91850	93700	2.0
East Missouri	33361	34490	35428	36037	36666	37293	37928	38560	39196	39840	40483	1.8
S Cent Illinois	35721	37095	38168	39054	39800	40403	41057	41786	42658	43588	44426	2.0
Wis-Upper Mich	49499	50693	51623	52486	53223	54017	54957	56145	57239	58310	59300	1.8
MAPP-US	127102	129406	132351	134912	137872	140051	142887	145712	148537	151313	154163	2.0
NPCC-US	250681	254207	256446	258752	261158	263185	265590	268060	271014	274607	278146	1.0
New York	140919	145230	147340	149090	150770	151920	153230	154380	155510	156600	157820	0.9
NEPOOL	109762	108977	109106	109662	110388	111265	112360	113680	115504	118007	120326	1.1
SERC	627707	654690	674670	690320	707948	726975	744802	762541	780914	798924	813862	2.4
Florida	142502	148747	153729	158232	162572	167499	171689	176194	180848	185579	189972	2.8
Southern	154870	157842	161725	162997	166297	170495	174499	178428	182402	186305	189269	2.0
TVA	118983	126023	129632	133250	137012	141029	144332	147659	150986	154311	157731	2.5
VACAR	211352	222078	229584	235841	242067	247952	254282	260260	266678	272729	276890	2.5
SPP	252037	252008	257110	263543	268738	273759	279577	285470	291229	297560	303487	2.1
Southeast	113274	112797	113992	116975	118744	119731	121607	123587	125688	128075	130553	1.6
West Central	82481	81794	83894	85925	87933	90432	92743	95142	97261	99673	101577	2.4
Northern	56282	57417	59224	60643	62061	63596	65227	66741	68280	69812	71357	2.4
WSCC-US	558248	563679	577733	586975	596445	607015	617830	626744	637083	647707	658632	1.7
NW Power Pool	212717	213606	218385	220690	223178	226077	229099	231192	233787	236365	239667	1.3
Rocky Mtn	38487	39283	40897	41714	42641	43228	44091	44926	45926	46931	47785	2.2
Ariz-N. Mex	63743	66764	69334	71202	73383	75437	77392	79219	81026	82957	84865	2.7
Calif-So. Nev	243301	244026	249117	253369	257243	262273	267248	271407	276344	281454	286315	1.8
TOTAL(U.S.)	2886496	2950732	3021803	3081002	3139576	3199202	3262553	3322465	3385497	3450502	3513440	2.0
Canada												
MAPP-CAN	30600	32104	33400	34448	35359	36047	37032	37863	38708	39511	40304	2.6
NPCC-CAN	301553	322253	334738	345064	351370	359245	369126	375661	381346	388493	395509	2.3
New Brunswick	12638	13404	14094	14421	14911	15362	15824	16293	16762	17229	17694	3.1
Nova Scotia	9328	10015	10345	10623	10890	11146	11413	11699	11987	12278	12594	2.6
Ontario	136744	143517	149438	152413	155789	159746	163841	166461	168971	171292	173876	2.2
Quebec	142843	155317	160861	167607	169780	172991	178048	181208	183626	187694	191345	2.3
WSCC-CAN	88342	91374	93974	95906	98303	101660	104289	106428	108757	110759	112663	2.4
TOTAL(Canada)	420495	445731	462112	475418	485032	496952	510447	519952	528811	538763	548476	2.3
Mexico												
WSCC-MEX	4202	4576	5013	5449	5928	6481	7067	7706	8403	9163	9991	9.1
NERC-Total	3311193	3401039	3488928	3561869	3630536	3702635	3780067	3850123	3922711	3998428	4071907	2.0
ASCC	3539	3583	3634	3684	3749	3782	3837	3895	3959	4020	4090	1.5

Planned Capacity Resources

To serve projected peak demand and NEL requirements, utilities in the United States are planning to increase their planned capacity resources over the 1991-2000 period by 87,700 MW (summer) — an average annual increase of 1.3%. In Canada, utilities are planning to increase resources by 17,100 MW (winter) — an average annual increase of 1.8%.

Planned capacity resources include utility and non-utility owned generating capacity that is existing or in various stages of planning or construction, less inoperable capacity, plus planned capacity purchases from other utilities, less planned capacity sales.

Planned capacity resources as reported in Tables 4S and 4W are at the time of the summer or winter peak demand. These data are taken from Item 3A, Line 13 of the April 1, 1991 IE-411 reports.

Capacity Margins

Capacity margins in the United States are projected to decrease from 22.3% in summer 1991 to 19.1% in summer 2000. In Canada, margins are projected to decrease from 18.3% in winter 1991/92 to 16.6% in winter 2000/01.

Generating capacity margin is the fraction of generating capacity available to provide for scheduled maintenance, emergency outages, system operating requirements, and unforeseen electricity demand.

Percent capacity margins are: Planned Capacity Resources minus Peak Demand plus Direct Control Load Management and Interruptible Demand, expressed as a percent of Planned Capacity Resources. All data are at the time of the summer or winter peak. **Capacity margins are not sufficient indexes of electric supply adequacy.** Adequacy is discussed in more detail in NERC's *Reliability Assessment 1991-2000*.

Figure 3

Generating Capacity by Fuel (% Total)

	1991						2000					
	Coal	Nuclear	Hydro	Oil/ Gas	Other (Util)	NUGs	Coal	Nuclear	Hydro	Oil/ Gas	Other (Util)	NUGs
Summer												
ECAR	80.9	7.6	0.6	6.2	3.5	1.2	75.8	6.3	0.6	9.9	4.5	3.0
ERCOT	26.2	6.7	0.8	60.4	0.0	5.9	30.9	7.8	0.7	57.1	1.8	1.8
MAAC	33.4	23.6	2.0	33.9	3.0	4.1	30.2	20.7	1.7	36.7	2.8	7.9
MAIN	55.2	30.1	1.1	12.8	0.7	0.1	50.1	27.3	1.0	20.8	0.6	0.3
MAPP-U.S.	63.6	11.7	9.3	13.8	0.5	1.2	61.2	11.2	8.3	13.8	4.3	1.2
NPCC-U.S.	13.1	19.8	9.5	47.7	4.8	5.2	12.1	18.1	9.4	43.0	4.5	12.9
SERC	48.3	19.9	7.7	19.4	3.1	1.6	41.4	18.8	6.2	24.5	5.6	3.4
SPP	39.8	8.7	3.7	46.4	0.7	0.7	38.2	8.1	3.6	48.7	0.7	0.8
WSCC-U.S.	23.4	8.5	33.1	24.4	4.3	6.3	22.0	7.8	31.5	25.7	5.2	7.8
United States	43.0	14.5	9.7	27.0	2.8	3.0	39.9	13.6	8.8	29.2	3.8	4.6
Winter												
MAPP-Canada	23.7	0.0	71.5	4.8	0.0	0.0	25.0	0.0	69.6	5.3	0.0	0.0
NPCC-Canada	18.0	21.1	49.5	10.3	0.0	1.0	15.1	19.0	52.8	10.1	0.4	2.7
WSCC-Canada	29.7	0.0	58.3	12.0	0.0	0.0	28.6	0.0	52.9	10.3	5.3	2.9
Canada	21.2	15.0	52.9	10.2	0.0	0.7	18.4	14.0	54.1	9.7	1.3	2.5

Percentages may not add due to rounding.

Electricity Generating Capacity

Generating Capacity Projections

Total generating capacity (utility and non-utility) in the United States is projected to increase by 85,200 MW (summer) over the 1991-2000 period. In Canada, Generating Capacity is projected to increase by 19,100 MW (winter).

Generating capacity includes utility and non-utility owned generating capacity that is existing or in various stages of planning or construction. Data on non-utility owned capacity, as reported by utilities, reflects **only** the amount of capacity under contract or projected to be under contract to those utilities during the forecast period. All data are at the time of the summer or winter peak.

Definitions

Capacity/Capability — A measure of the ability to generate electric power, usually expressed in megawatts (MW). Capacity can refer to the output of a single generator, a plant, an entire electric system, a power pool, or Region. Summer or winter capacity refers to the capacity during the summer or winter peak demand period.

Net Capacity/Capability — The maximum capacity (or effective rating), modified for ambient limitations, that a generating unit, power plant, or system can sustain over a specified period of time, less the capacity used to supply the demand of station service or auxiliary needs (such as fan motors, pump motors, and other equipment essential to operation of the generating units).

Inoperable Capacity/Capability — Capacity that is totally or partially out of service for reasons such as: environmental restrictions, legal or regulatory restrictions, extensive modifications or repair, or capacity specified as being in a mothballed state.

Non-Utility Generators (NUGs) — Facilities for generating electricity that operate connected to an electric utility system in which total utility ownership is less than 50%. Sale/leaseback arrangements are not reported as NUGs, particularly because the utility involved continues to operate the unit.

Capacity Purchases — A capacity transfer into a Region or subregion during the month of the seasonal peak of the purchasing Region or subregion that is expected to be under contract for that period.

Capacity Sales — A capacity transfer out of a Region or subregion during the month of the seasonal peak of the selling Region or subregion that is expected to be under contract for that period.

Hydro Capacity — Conventional hydro. Projected capacity is generally based on adverse hydro conditions.

Dual Fuel (Oil/Gas) Capacity — Generating units equally capable of burning oil or gas depending only on price or availability.

Table 4S

Planned Capacity Resources - Summer - MW

	Projected										AAGR
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	(%)
United States											
ECAR	97588	99692	100451	101745	103424	104466	105483	106105	106846	108747	1.2
ERCOT	53549	54007	55272	54873	55872	56672	57461	58276	59226	61355	1.5
MAAC	54132	54495	55590	56790	57331	58499	59184	60614	61335	62056	1.5
MAIN	48244	49242	49481	50144	50876	51242	51983	53046	53807	54595	1.4
Cmnwlth Edison	20795	21775	21755	21960	21960	22092	22572	23052	23452	23932	1.6
East Missouri	8229	8259	8348	8437	8574	8603	8688	8693	8848	9078	1.1
S Cent Illinois	9074	9167	9150	9361	9636	9623	9668	9933	10039	10070	1.2
Wis-Upper Mich	10146	10041	10228	10386	10706	10924	11055	11368	11468	11515	1.4
MAPP-US	32063	32017	32357	32518	32670	33251	33510	33617	33949	34208	0.7
NPCC-US	60878	62299	63272	64240	65287	65874	66213	66052	65979	65775	0.9
New York	33489	34703	35995	37205	38305	38845	39144	39144	39140	39140	1.7
NEPOOL	27389	27596	27277	27035	26982	27029	27069	26908	26839	26635	-.3
SERC	146076	150148	153782	157435	162319	167545	169552	174192	177041	181570	2.4
Florida	33964	33707	34480	35694	36829	37600	38183	39625	40685	42335	2.5
Southern	35796	36324	37187	38550	39917	40616	41330	42184	42819	43314	2.1
TVA	26942	28112	29177	29177	29401	31636	31636	32848	33448	34960	2.9
VACAR	49374	52005	52938	54014	56172	57693	58403	59535	60089	60961	2.4
SPP	67333	67505	67812	68036	68323	69078	69873	71052	72069	73947	1.0
Southeast	28063	27878	27993	27952	27892	28262	28402	28986	29503	30816	1.0
West Central	22689	22731	22706	22716	22782	22895	23256	23612	23758	24104	0.7
Northern	16581	16896	17113	17368	17649	17921	18215	18454	18808	19027	1.5
WSCC-US[a]	127478	128500	130093	131324	132523	134060	134648	135752	136014	136864	0.8
NW Pool	43057	42956	43182	43143	43302	43533	43651	43612	43348	43367	0.1
Rocky Mt Area	8892	9026	9306	9525	9939	10008	10064	10065	10068	10070	1.4
Ariz-N.Mex	16739	16954	16810	16932	16748	16852	16994	17396	17515	17694	0.6
Calif-So. Nev	61191	61744	62921	63722	64363	65720	66217	66809	67609	67990	1.2
TOTAL(U.S.)	687341	697905	708110	717105	728625	740687	747907	758706	766266	779117	1.4
Canada											
MAPP-CAN	6916	7532	7385	7385	7144	7144	7414	7414	7214	7236	0.5
NPCC-CAN	63874	66864	68623	70901	71900	72209	73379	74971	77674	78385	2.3
New Brunswick	3070	3158	3158	3501	3493	3643	3643	3793	3893	4043	3.1
Nova Scotia	2103	2147	2322	2342	2342	2442	2442	2607	2607	2607	2.4
Ontario	30551	31553	32623	32742	32910	33025	33151	33662	34685	34831	1.5
Quebec	28150	30006	30520	32316	33155	33099	34143	34909	36489	36904	3.1
WSCC-CAN	18669	19075	19172	19519	19860	19935	19952	20152	20852	21090	1.4
TOTAL(Canada)	89459	93471	95180	97805	98904	99288	100745	102537	105740	106711	2.0
Mexico											
WSCC-MEX	1110	1110	1148	1208	1533	1571	2116	2116	2116	2116	7.4
NERC-Total	777910	792486	804438	816118	829062	841546	850768	863359	874122	887944	1.5
ASCC	1176	1169	1172	1172	1172	1172	1172	1172	1172	1172	0.0

---

[a] Sum of the subregional capacity resources may not equal the WSCC-U.S. totals because: (1) subregional peak demands on which resources are based may occur in different months than the coincident WSCC-U.S. peak and (2) in some cases firm capacity transfers are reported for which either the purchasing or selling entity is not yet identified.

Table 4W

Planned Capacity Resources - Winter - MW

	Projected										AAGR
	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	(%)
United States											
ECAR	100344	101264	102650	103922	105620	106584	107270	108072	109726	110796	1.1
ERCOT	53761	54410	55303	55301	56203	57092	57782	58496	59676	61577	1.5
MAAC	56402	56857	58238	59539	60449	61391	62241	63853	64691	65529	1.7
MAIN	49596	49477	49815	50975	51441	52006	52877	54141	54899	55961	1.4
Cmnwith Edison	22357	22332	22312	22517	22522	22680	23280	23880	24380	24980	1.2
East Missouri	7986	8016	8109	8547	8649	8678	8763	8768	8923	9153	1.5
S Cent Illinois	9137	9032	9102	9423	9437	9435	9500	9827	9909	9982	1.0
Wis-Upper Mich	10116	10097	10292	10488	10833	11213	11334	11666	11687	11846	1.8
MAPP-US	31379	31356	32309	32376	32498	32837	33142	33420	33654	33961	0.9
NPCC-US	60762	62354	63384	64358	65100	65639	65751	65692	65642	65253	0.8
New York	33444	35058	36320	37523	38219	38719	39019	39019	39015	39015	1.7
NEPOOL	27318	27296	27064	26835	26881	26920	26732	26673	26627	26238	-.4
SERC	148797	155208	157962	161761	168198	171010	174578	179166	181501	186629	2.5
Florida	34623	35242	36635	37718	38452	39124	40041	41967	42517	44662	2.9
Southern	35976	36886	37683	38500	40070	40768	41482	42416	42985	43720	2.2
TVA	27216	29451	29451	29675	31910	31910	33122	33722	35234	35534	3.0
VACAR	50982	53629	54193	55868	57766	59208	59933	61061	60765	62713	2.3
SPP	67668	67797	68118	68390	68951	69616	70496	71477	72656	74034	1.0
Southeast	28196	28013	28067	28075	28297	28565	28855	29242	29765	30657	0.9
West Central	22599	22641	22647	22656	22714	22850	23146	23501	23803	24070	0.7
Northern	16873	17143	17404	17659	17940	18201	18495	18734	19088	19307	1.5
WSCC-US[a]	130392	132050	133460	134423	136357	137088	138190	138792	139624	140262	0.8
NW Pool	48033	48334	48754	48780	49176	49256	49621	49768	49338	49362	0.3
Rocky Mt Area	8999	9207	9373	9590	10003	10084	10161	10162	10157	10159	1.4
Ariz-N.Mex	16016	16945	16987	17047	16886	16990	17117	17419	17665	17727	1.1
Calif-So. Nev	57510	58226	59007	59843	60962	61594	62189	63190	64404	64481	1.3
TOTAL(U.S.)	699101	710773	721239	731045	744817	753263	762327	773109	782069	794002	1.4
Canada											
MAPP-CAN	8025	8592	7792	7867	8167	8647	8647	8447	8447	8577	0.7
NPCC-CAN	67468	70379	72527	74343	74789	75901	76565	79413	80543	81604	2.1
New Brunswick	3238	3238	3581	3573	3723	3723	3873	3973	4123	4104	2.7
Nova Scotia	2156	2200	2375	2395	2395	2495	2495	2660	2660	2660	2.4
Ontario	31000	32328	33143	33245	33224	33537	33676	35071	35217	35538	1.5
Quebec	31074	32613	33428	35130	35447	36146	36521	37709	38543	39302	2.6
WSCC-CAN	18166	18208	18580	18628	18909	18917	19017	19317	20055	20266	1.2
TOTAL(Canada)	93659	97179	98899	100838	101865	103465	104229	107177	109045	110447	1.8
Mexico											
WSCC-MEX	1118	1137	1186	1216	1560	1799	2124	2124	2124	2124	7.4
NERC-Total	793878	809089	821324	833099	848242	858527	868680	882410	893238	906573	1.5
ASCC	1284	1276	1279	1279	1279	1279	1279	1279	1279	1279	0.0

---

[a] Sum of the subregional capacity resources may not equal the WSCC-U.S. totals because: (1) subregional peak demands on which resources are based may occur in different months than the coincident WSCC-U.S. peak and (2) in some cases firm capacity transfers are reported for which either the purchasing or selling entity is not yet identified.

Table 5S

Capacity Margins - Summer - (% of Planned Capacity Resources)

	Projected									
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States										
ECAR	18.7	19.1	18.4	18.2	18.3	17.8	17.3	16.5	15.8	16.0
ERCOT	21.7	20.7	20.9	18.7	18.2	17.5	17.2	16.5	15.9	16.7
MAAC	19.9	19.2	19.6	20.2	20.0	20.4	20.1	20.9	20.7	20.5
MAIN	16.1	16.4	15.5	15.4	15.4	14.7	14.5	14.9	14.7	14.7
Cmnwlth Edison	16.1	18.4	16.7	15.9	14.4	13.1	13.2	13.3	13.1	13.2
East Missouri	14.5	13.7	13.7	13.6	14.1	13.4	13.2	13.1	13.8	15.4
S Cent Illinois	20.6	19.5	18.2	18.6	19.9	19.3	18.7	19.7	19.2	18.3
Wis-Upper Mich	13.5	11.6	12.2	12.7	14.4	14.9	14.5	15.4	14.8	14.0
MAPP-US	25.0	24.3	24.6	24.6	24.5	24.9	24.5	23.7	23.3	22.7
NPCC-US	24.4	26.3	27.1	27.9	28.6	28.5	28.1	27.1	26.0	24.9
New York	21.9	24.2	26.5	28.5	29.9	30.3	30.3	29.8	29.4	29.1
NEPOOL	27.4	28.9	27.8	27.1	26.7	25.9	24.8	23.0	21.1	18.8
SERC	17.1	17.3	16.8	16.9	17.3	18.0	17.0	17.4	16.9	17.4
Florida	20.0	17.8	18.1	19.1	19.5	19.7	19.3	20.4	21.0	22.1
Southern	14.3	13.5	13.5	14.9	16.0	15.6	15.2	15.1	14.6	14.3
TVA	19.7	21.0	20.4	17.6	15.3	19.1	16.6	17.2	16.3	17.7
VACAR	15.8	17.5	16.4	16.4	17.8	18.1	17.0	17.1	16.1	16.3
SPP	23.4	22.3	20.8	19.6	18.6	18.0	17.5	17.5	17.1	17.7
Southeast	22.3	21.0	19.3	18.0	17.1	17.1	16.6	17.1	17.1	19.1
West Central	25.0	23.2	21.5	20.1	18.4	17.2	16.5	16.1	15.1	14.8
Northern	23.3	23.0	22.2	21.7	21.2	20.7	20.3	19.8	19.7	19.0
WSCC-US	28.6	27.5	27.0	26.3	25.6	25.1	24.1	23.4	22.2	21.3
NW Power Pool	36.0	34.5	33.8	32.9	32.4	32.0	31.3	30.4	29.2	28.4
Rocky Mtn	27.9	26.3	27.0	27.1	28.6	27.6	26.3	24.6	22.7	21.2
Ariz-N Mex	26.9	26.3	24.3	22.7	20.1	18.8	17.7	17.9	16.6	15.5
Calif-So Nev	26.5	25.5	25.5	24.8	23.9	24.0	23.2	22.4	21.9	20.8
TOTAL(U.S.)	21.8	21.6	21.3	20.9	20.8	20.7	20.1	19.8	19.2	19.1
Canada										
MAPP-CAN	37.2	40.5	37.6	35.5	31.3	29.4	30.5	28.6	25.1	23.6
NPCC-CAN	38.3	39.6	39.6	40.5	40.1	38.9	38.8	39.3	40.2	40.0
New Brunswick	46.4	47.4	45.7	49.3	47.7	48.3	46.6	47.2	47.0	47.5
Nova Sccotia	40.6	40.4	43.3	42.2	40.7	41.5	39.9	42.2	40.7	39.0
Ontario	36.6	36.2	37.0	36.0	34.8	33.7	33.0	33.3	34.6	34.2
Quebec	39.0	42.3	41.4	44.1	44.5	42.8	43.5	44.0	44.8	44.7
WSCC-CAN	37.1	37.1	36.5	36.0	35.3	34.5	33.1	32.3	33.5	33.0
TOTAL(Canada)	37.9	39.2	38.8	39.2	38.5	37.3	37.1	37.1	37.9	37.5
Mexico										
WSCC-MEX	16.2	8.5	4.4	1.7	15.7	11.3	29.1	23.5	17.5	11.1
NERC-Total	23.7	23.7	23.3	23.1	22.9	22.7	22.1	21.9	21.4	21.3
ASCC	59.9	59.2	58.6	57.8	57.3	56.7	55.9	55.3	54.6	54.0

Table 5W

Capacity Margins - Winter - (% of Planned Capacity Resources)

	Projected									
	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
United States										
ECAR	26.1	25.4	25.0	24.8	24.8	24.3	23.6	22.9	22.9	22.5
ERCOT	36.1	35.0	34.1	32.1	31.4	30.8	29.9	28.9	28.3	28.5
MAAC	33.4	33.0	33.4	33.7	33.4	33.1	32.8	33.2	32.9	32.6
MAIN	33.8	32.4	31.7	32.0	31.4	31.0	30.8	31.2	30.9	31.0
Cmnwlth Edison	38.5	37.4	36.1	35.5	34.2	33.3	33.7	34.1	34.2	34.6
East Missouri	28.8	27.4	26.7	28.9	28.3	27.1	26.1	25.6	25.4	26.2
S Cent Illinois	36.5	34.1	33.1	34.2	33.3	32.5	31.6	32.5	31.8	31.0
Wis-Upper Mich	25.0	23.5	24.6	25.2	26.6	28.0	27.6	28.3	27.3	26.9
MAPP-US	33.5	32.1	33.1	32.5	31.8	31.4	31.0	30.5	29.9	29.3
NPCC-US	29.4	31.1	31.7	32.3	32.5	32.3	31.8	30.7	29.7	28.6
New York	29.4	32.3	33.9	35.4	35.9	36.1	36.1	35.4	34.8	34.4
NEPOOL	29.4	29.7	28.8	27.9	27.7	26.9	25.6	23.9	22.2	19.9
SERC	20.6	22.0	21.5	21.7	23.0	22.4	22.3	22.4	21.9	22.4
Florida	13.1	12.2	13.1	13.4	12.9	12.3	11.9	13.7	12.6	14.6
Southern	32.1	32.5	32.8	33.2	34.4	34.1	33.7	33.8	33.5	33.4
TVA	18.0	22.6	21.0	19.8	24.3	22.8	24.2	24.2	26.2	25.0
VACAR	18.8	20.9	19.6	20.3	21.0	20.9	20.3	19.6	17.6	18.8
SPP	42.2	40.9	39.7	38.8	38.0	37.2	36.6	36.1	35.9	35.8
Southeast	40.6	39.0	37.6	36.8	36.4	35.8	35.3	34.9	34.7	35.4
West Central	42.7	41.3	39.9	38.5	36.9	35.7	34.8	34.3	33.7	33.0
Northern	43.9	43.5	42.8	42.3	41.8	41.3	40.9	40.4	40.3	39.7
WSCC-US	31.7	31.3	30.9	30.2	30.0	29.1	28.6	27.6	26.8	26.0
NW Power Pool	24.9	24.2	23.7	23.0	22.8	21.9	21.7	21.0	19.3	18.4
Rocky Mtn	28.1	27.8	27.5	27.5	28.9	27.8	26.8	25.1	23.4	21.8
Ariz-N Mex	39.4	41.2	39.5	38.0	35.9	34.7	33.6	33.3	32.5	31.2
Calif-So Nev	36.0	35.5	35.6	35.2	35.1	34.4	34.0	33.6	33.6	32.6
TOTAL(U.S.)	30.1	29.8	29.5	29.2	29.2	28.6	28.2	27.8	27.2	27.0
Canada										
MAPP-CAN	25.6	28.2	19.0	17.5	18.7	21.6	19.9	16.6	15.1	14.6
NPCC-CAN	14.4	15.3	16.3	16.7	15.1	14.5	14.0	15.8	15.4	15.3
New Brunswick	18.1	16.1	21.5	18.5	19.4	17.0	17.9	17.8	18.7	16.3
Nova Scotia	18.3	17.5	21.3	20.0	17.7	19.2	17.4	20.6	18.6	16.6
Ontario	21.8	23.2	23.5	21.9	20.1	18.9	18.2	20.6	20.0	19.7
Quebec	6.4	7.2	8.3	11.4	9.7	9.9	9.4	10.8	10.6	11.1
WSCC-CAN	18.3	16.8	16.5	14.8	13.6	12.0	11.0	10.4	12.3	11.7
TOTAL(Canada)	16.1	16.7	16.6	16.4	15.1	14.7	13.9	14.9	14.8	14.6
Mexico										
WSCC-MEX	41.4	37.6	35.4	31.3	42.4	46.2	50.8	47.0	42.8	38.3
NERC-Total	28.4	28.3	28.0	27.6	27.5	27.0	26.5	26.2	25.7	25.5
ASCC	51.5	50.6	49.7	48.9	48.1	47.5	46.7	45.8	45.0	44.3

Table 6S

Generating Capacity by Fuel - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
Coal	293657	296466	297831	297889	298323	300248	301913	302600	303457	304711	308883
Nuclear	98759	99844	100262	101532	101578	101625	102820	102820	104032	104032	105007
Hydro	72189	66972	67055	67317	67499	67728	67815	68335	68398	68402	68389
Oil	57964	58523	57764	57677	58438	59522	60161	60866	61903	62264	62830
Gas	56029	57069	57942	59916	62614	65483	67439	70351	74440	76672	78483
Dual Fuel (Oil/Gas)	70065	70186	70506	71309	72436	73991	76205	77597	79734	82075	85171
Pumped Storage	15961	16358	17740	17763	17837	18749	18722	18733	18742	18822	18821
Geothermal	1807	1759	1759	1759	1759	1759	1759	1759	1759	1759	1759
Other(Utility)	504	864	900	1052	1037	1989	3010	3731	5138	7437	9432
NUGs	18156	20853	25632	29809	33150	34172	35301	35643	35706	35341	35352
TOTAL(U.S.)	685091	688894	697391	706023	714671	725266	735145	742435	753309	761515	774127
Canada											
Coal	18572	18980	19649	19814	20257	20053	20053	20323	20488	20488	20306
Nuclear	11906	13707	14588	15466	15461	15456	15456	15456	15456	15456	15456
Hydro	44041	47026	49120	49344	50786	51865	52832	53772	54909	57167	57674
Oil	5130	5129	5551	5552	5553	5451	5702	5703	5854	5854	6005
Gas	3579	3530	3510	3931	4318	4407	4401	4666	4666	4666	4678
Dual Fuel (Oil/Gas)	0	0	0	0	116	116	116	116	116	116	116
Pumped Storage	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0
Other(Utility)	0	0	0	0	0	299	299	299	399	599	899
NUGs	110	408	703	1109	1505	1963	2104	2243	2387	2532	2678
TOTAL(Canada)	83338	88780	93121	95216	97996	99610	100963	102578	104275	106878	107812
Mexico											
Coal	0	0	0	0	0	325	325	650	650	650	650
Nuclear	0	0	0	0	0	0	0	0	0	0	0
Hydro	0	0	0	0	60	60	60	60	60	60	60
Oil	455	755	755	755	755	755	755	755	755	755	755
Gas	0	0	0	0	0	0	0	0	0	0	0
Dual Fuel (Oil/Gas)	0	0	0	0	0	0	0	0	0	0	0
Pumped Storage	0	0	0	0	0	0	0	0	0	0	0
Geothermal	575	575	575	613	613	613	651	651	651	651	651
Other(Utility)	0	0	0	0	0	0	0	0	0	0	0
NUGs	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Mexico)	1030	1330	1330	1368	1428	1753	1791	2116	2116	2116	2116
ASCC											
Coal	54	54	54	54	54	54	54	54	54	54	54
Nuclear	0	0	0	0	0	0	0	0	0	0	0
Hydro	49	157	157	157	157	157	157	157	157	157	157
Oil	174	174	174	177	177	177	177	177	177	177	177
Gas	494	494	487	487	487	487	487	487	487	487	487
Dual Fuel (Oil/Gas)	297	297	297	297	297	297	297	297	297	297	297
Pumped Storage	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0
Other(Utility)	0	0	0	0	0	0	0	0	0	0	0
NUGs	0	0	0	0	0	0	0	0	0	0	0
TOTAL(ASCC)	1068	1176	1169	1172	1172	1172	1172	1172	1172	1172	1172

Table 6W

Generating Capacity by Fuel - Winter - MW

	Actual	Projected									
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
United States											
Coal	295943	298398	299629	300067	300906	302547	303360	304380	305242	306087	310412
Nuclear	100676	99959	101157	102448	102448	103665	103690	104902	104902	106047	105874
Hydro	70073	68695	69157	69437	69514	69866	70034	70479	70487	70491	70468
Oil	62970	62850	62960	63185	64105	64903	65703	66306	67081	67852	67876
Gas	57929	58616	60219	62311	65171	67921	70251	73266	77706	80356	82686
Dual Fuel (Oil/Gas)	72126	72311	72923	73712	74859	76714	79047	80749	82889	85898	88417
Pumped Storage	16289	17118	17832	17881	17971	18869	18869	18869	18969	18969	18969
Geothermal	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765
Other(Utility)	499	585	620	774	1089	2701	3549	4130	6876	8260	10914
NUGs	18487	23061	27585	31323	34076	34757	35689	35973	35958	35502	35590
TOTAL(U.S.)	696757	703358	713847	722903	731904	743708	751957	760819	771875	781227	792971
Canada											
Coal	18985	19416	19659	20267	20063	20063	20343	20343	20508	20446	20316
Nuclear	12826	13707	14585	15461	15456	15456	15456	15456	15456	15456	15456
Hydro	46338	48327	49898	50358	51899	53021	54303	54676	56913	57708	59815
Oil	5080	5760	5762	5764	5662	5814	5915	6067	6068	6220	6213
Gas	3452	3562	4013	4400	4505	4486	4742	4742	4742	4742	4453
Dual Fuel (Oil/Gas)	0	0	0	136	136	136	136	136	136	136	136
Pumped Storage	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0
Other(Utility)	0	0	0	0	299	299	299	399	599	899	1399
NUGs	207	635	1044	1435	1620	2061	2200	2344	2489	2635	2756
TOTAL(Canada)	86888	91407	94961	97821	99640	101336	103394	104163	106911	108242	110544
Mexico											
Coal	0	0	0	0	0	325	325	650	650	650	650
Nuclear	0	0	0	0	0	0	0	0	0	0	0
Hydro	0	0	0	30	60	60	60	60	60	60	60
Oil	455	755	755	755	755	755	755	755	755	755	755
Gas	0	0	0	0	0	0	0	0	0	0	0
Dual Fuel (Oil/Gas)	0	0	0	0	0	0	0	0	0	0	0
Pumped Storage	0	0	0	0	0	0	0	0	0	0	0
Geothermal	583	583	602	621	621	640	659	659	659	659	659
Other(Utility)	0	0	0	0	0	0	0	0	0	0	0
NUGs	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Mexico)	1038	1338	1357	1406	1436	1780	1799	2124	2124	2124	2124
ASCC											
Coal	54	54	54	54	54	54	54	54	54	54	54
Nuclear	0	0	0	0	0	0	0	0	0	0	0
Hydro	49	157	157	157	157	157	157	157	157	157	157
Oil	208	208	208	211	211	211	211	211	211	211	211
Gas	536	536	528	528	528	528	528	528	528	528	528
Dual Fuel (Oil/Gas)	329	329	329	329	329	329	329	329	329	329	329
Pumped Storage	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0
Other(Utility)	0	0	0	0	0	0	0	0	0	0	0
NUGs	0	0	0	0	0	0	0	0	0	0	0
TOTAL(ASCC)	1176	1284	1276	1279	1279	1279	1279	1279	1279	1279	1279

Table 7S

Generating Capacity by Region - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	99480	101312	102016	102394	103684	105188	106176	107193	107815	108556	109557
ERCOT	54114	54101	54559	55824	55404	56244	57020	57640	58402	59322	61479
MAAC	51279	53531	53884	55055	56237	56778	57611	58296	59726	60447	61168
MAIN	49184	49307	49316	49669	50222	50557	51113	51864	52902	53758	54541
Cmnwlth Edison	21965	21965	21965	21965	21965	21965	22092	22572	23052	23452	23932
East Missouri	8193	8287	8287	8287	8287	8287	8311	8386	8386	8536	8761
S Cent Illinois	9605	9577	9577	9578	9714	9714	9736	9811	10046	10252	10283
Wis-Upper Mich	9421	9478	9487	9839	10256	10591	10974	11095	11418	11518	11565
MAPP-US	32164	31633	31516	31508	31683	31779	32069	32329	32434	32766	33026
NPCC-US	56146	57706	59537	60570	61670	62332	62351	62670	62559	62486	62282
New York	32102	32880	34269	35511	36626	37291	37341	37673	37673	37669	37669
NEPOOL	24044	24826	25268	25059	25044	25041	25010	24997	24886	24817	24613
SERC	144281	146933	151130	153696	157071	162159	166420	168427	173317	176166	181591
Florida	30511	31400	31142	32775	34176	35192	35963	36546	37988	39048	40823
Southern	37383	38123	38777	38777	39675	41165	41864	42578	43682	44317	44683
TVA	29574	29485	30655	30655	30655	30879	32049	32049	33261	33861	35373
VACAR	46813	47925	50556	51489	52565	54923	56544	57254	58386	58940	60712
SPP	66833	67289	67329	67610	67742	68172	68791	69614	70548	71646	73265
Southeast	28065	28128	28094	28350	28367	28414	28515	28732	29061	29602	29826
West Central	23047	23406	23406	23406	23406	23575	23610	23946	24343	24563	24745
Northern	15721	15755	15829	15854	15969	16183	16666	16936	17144	17481	18694
WSCC-US[a]	131610	127082	128104	129697	130958	132057	133594	134402	135606	136368	137218
NW Power Pool	50054	44553	44768	45169	45274	45435	45569	45732	45789	46020	46034
Rocky Mtn	9395	9576	9700	9972	10216	10627	10707	10761	10760	10761	10761
Ariz-N. Mex	16521	16576	16575	16701	16823	16682	16736	16863	17170	17314	17478
Calif-So. Nev	55596	55497	56181	56965	57746	58349	59684	60161	60783	61393	62046
TOTAL(U.S.)	685091	688894	697391	706023	714671	725266	735145	742435	753309	761515	774127
Canada											
MAPP-CAN	7032	7316	7932	8035	8035	8119	8119	8389	8389	8389	8411
NPCC-CAN	57762	62653	65972	67867	70300	71489	72767	74095	75692	78095	78769
New Brunswick	3258	3258	3678	3678	4121	4113	4263	4263	4413	4413	4563
Nova Scotia	1953	2103	2147	2322	2342	2342	2442	2442	2607	2607	2607
Ontario	30088	32131	33137	34203	34337	34505	34968	35107	35623	36446	36592
Quebec	22463	25161	27010	27664	29500	30529	31094	32283	33049	34629	35007
WSCC-CAN	18544	18811	19217	19314	19661	20002	20077	20094	20194	20394	20632
TOTAL(Canada)	83338	88780	93121	95216	97996	99610	100963	102578	104275	106878	107812
Mexico											
WSCC-MEX	1030	1330	1330	1368	1428	1753	1791	2116	2116	2116	2116
NERC-Total	769459	779004	791842	802607	814095	826629	837899	847129	859700	870509	884055
ASCC	1068	1176	1169	1172	1172	1172	1172	1172	1172	1172	1172

---

[a] Sum of the subregional capacity may not equal the WSCC-U.S. totals because subregional peak demands on which capacity is based may occur in different months than the coincident WSCC-U.S. peak.

Table 7W

Generating Capacity by Region - Winter - MW

	Actual	Projected									
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
United States											
ECAR	101384	102813	103507	104739	105686	107330	108294	108980	109782	110536	111606
ERCOT	54328	54313	54962	55834	55673	56551	57439	57908	58675	59828	61691
MAAC	53720	55801	56246	57688	58986	59561	60503	61353	62965	63803	64641
MAIN	50204	50279	50294	50661	51222	51616	52231	53102	54301	55054	56111
Cmnwlth Edison	22522	22522	22522	22522	22522	22522	22680	23280	23880	24380	24980
East Missouri	8340	8384	8384	8384	8384	8384	8408	8483	8483	8633	8858
S Cent Illinois	9701	9701	9701	9702	9858	9877	9880	9955	10222	10304	10377
Wis-Upper Mich	9641	9672	9687	10053	10458	10833	11263	11384	11716	11737	11896
MAPP-US	32184	32328	32273	32305	32381	32637	32993	33299	33573	33807	34111
NPCC-US	59413	60324	61946	62983	64038	64254	64254	64434	64375	64325	63917
New York	33754	34310	35897	37111	38169	38415	38415	38748	38748	38744	38744
NEPOOL	25659	26014	26049	25872	25869	25839	25839	25686	25627	25581	25173
SERC	147743	149784	155205	157558	161680	167153	169965	173533	178291	181526	186650
Florida	31617	32061	33086	34731	36000	36815	37487	38404	40330	40880	43150
Southern	38002	38431	39010	39154	39908	41398	42096	42810	43914	44483	45089
TVA	29848	29759	30929	30929	31153	32323	32323	33535	34135	35647	35947
VACAR	48276	49533	52180	52744	54619	56617	58059	58784	59912	60516	62464
SPP	67200	67634	67674	67955	68087	68621	69342	70172	71173	72276	73534
Southeast	28069	28128	28094	28350	28367	28518	28732	28956	29342	29776	29667
West Central	23120	23482	23482	23482	23482	23651	23686	24022	24429	24761	24915
Northern	16011	16024	16098	16123	16238	16452	16924	17194	17402	17739	18952
WSCC-US[a]	130581	130082	131740	133180	134151	135985	136936	138038	138740	140072	140710
NW Power Pool	50377	48183	48516	48728	48756	49047	49173	49282	49525	49540	49559
Rocky Mtn	9641	9797	10012	10203	10417	10828	10908	10983	10982	10983	10983
Ariz-N. Mex	16580	16452	16749	16821	16857	16716	16770	16897	17199	17437	17507
Calif-So. Nev	53983	55584	56459	57428	58262	59340	60035	60785	61029	62112	62657
TOTAL(U.S.)	696757	703358	713847	722903	731904	743708	751957	760819	771875	781227	792971
Canada											
MAPP-CAN	7329	7425	8042	8042	8142	8142	8422	8422	8422	8422	8552
NPCC-CAN	60896	64913	67808	70296	71967	73382	75152	75821	78369	79462	81423
New Brunswick	3258	3758	3758	4201	4193	4343	4343	4493	4493	4643	4624
Nova Scotia	2006	2156	2200	2375	2395	2395	2495	2495	2660	2660	2660
Ontario	31488	32598	33712	34727	34844	35171	35497	35641	36836	36982	37103
Quebec	24144	26401	28138	28993	30535	31473	32817	33192	34380	35177	37036
WSCC-CAN	18663	19069	19111	19483	19531	19812	19820	19920	20120	20358	20569
TOTAL(Canada)	86888	91407	94961	97821	99640	101336	103394	104163	106911	108242	110544
Mexico											
WSCC-MEX	1038	1338	1357	1406	1436	1780	1799	2124	2124	2124	2124
NERC-Total	784683	796103	810165	822130	832980	846824	857150	867106	880910	891593	905639
ASCC	1176	1284	1276	1279	1279	1279	1279	1279	1279	1279	1279

---

[a] Sum of the subregional capacity may not equal the WSCC-U.S. totals because subregional peak demands on which capacity is based may occur in different months than the coincident WSCC-U.S. peak.

Coal-Fired Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	80249	81983	82152	82341	82491	82575	82604	82314	82341	82307	83012
ERCOT	14033	14188	14756	14756	14756	15506	16256	16256	16456	17206	19001
MAAC	17389	17883	17883	17883	18033	18033	18033	18033	18333	18398	18463
MAIN	27150	27228	27231	27268	27280	27240	27208	27208	27414	27514	27326
Cmnwlth Edison	6940	6940	6940	6940	6940	6940	6940	6940	6940	6940	6940
East Missouri	5585	5629	5629	5629	5629	5629	5653	5653	5653	5653	5653
S Cent Illinois	7860	7851	7851	7851	7851	7851	7795	7795	7795	7795	7671
Wis-Upper Mich	6765	6808	6811	6848	6860	6820	6820	6820	7026	7126	7062
MAPP-US	21024	20105	20129	20154	20154	20154	20154	20154	20154	20201	20201
NPCC-US	7621	7532	7532	7532	7532	7537	7537	7537	7537	7537	7537
New York	4852	4799	4799	4799	4799	4804	4804	4804	4804	4804	4804
NEPOOL	2769	2733	2733	2733	2733	2733	2733	2733	2733	2733	2733
SERC	69806	71014	71615	71422	71544	72670	73538	74358	74483	74483	75207
Florida	8500	8835	8835	8835	9101	9241	9366	9802	9802	9802	9802
Southern	24765	25212	25450	25181	25037	24886	24886	24886	25011	25011	25011
TVA	15833	15833	15833	15833	15833	16057	16057	16057	16057	16057	16057
VACAR	20708	21134	21497	21573	21573	22486	23229	23613	23613	23613	24337
SPP	26780	26794	26794	26794	26794	26794	26794	26807	26807	27007	27953
Southeast	6204	6204	6204	6204	6204	6204	6204	6204	6204	6204	6204
West Central	9957	9957	9957	9957	9957	9957	9957	9957	9957	9957	9957
Northern	10619	10633	10633	10633	10633	10633	10633	10646	10646	10846	11792
WSCC-US	29605	29739	29739	29739	29739	29739	29789	29933	29932	30058	30183
NW Power Pool	11140	11174	11174	11174	11174	11174	11174	11174	11174	11174	11174
Rocky Mtn	5736	5836	5835	5836	5836	5836	5836	5836	5835	5836	5836
Ariz-N. Mex	7686	7686	7687	7686	7686	7543	7593	7612	7612	7612	7612
Calif-So. Nev	5043	5043	5043	5043	5043	5186	5186	5311	5311	5436	5561
TOTAL(U.S.)	293657	296466	297831	297889	298323	300248	301913	302600	303457	304711	308883
Canada											
MAPP-CAN	1866	1741	1980	1980	1980	1980	1980	2250	2250	2250	2130
NPCC-CAN	11543	11693	11717	11882	12325	12121	12121	12121	12286	12286	12286
New Brunswick	304	304	304	304	747	543	543	543	543	543	543
Nova Scotia	1057	1207	1231	1396	1396	1396	1396	1396	1561	1561	1561
Ontario	10182	10182	10182	10182	10182	10182	10182	10182	10182	10182	10182
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	5163	5546	5952	5952	5952	5952	5952	5952	5952	5952	5890
TOTAL(Canada)	18572	18980	19649	19814	20257	20053	20053	20323	20488	20488	20306
Mexico											
WSCC-MEX	0	0	0	0	0	325	325	650	650	650	650
NERC-Total	312229	315446	317480	317703	318580	320626	322291	323573	324595	325849	329839
ASCC	54	54	54	54	54	54	54	54	54	54	54

Table 9

Nuclear Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	7704	7714	6959	6959	7005	7005	7005	7005	7005	7005	6938
ERCOT	3650	3650	3650	4800	4800	4800	4800	4800	4800	4800	4800
MAAC	12617	12647	12647	12647	12647	12647	12647	12647	12647	12647	12647
MAIN	14867	14860	14863	14863	14863	14863	14863	14863	14863	14863	14863
Cmnwlth Edison	11294	11294	11294	11294	11294	11294	11294	11294	11294	11294	11294
East Missouri	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125
S Cent Illinois	939	930	930	930	930	930	930	930	930	930	930
Wis-Upper Mich	1509	1511	1514	1514	1514	1514	1514	1514	1514	1514	1514
MAPP-US	3699	3711	3711	3711	3711	3711	3711	3711	3711	3711	3711
NPCC-US	10350	11419	11419	11444	11444	11444	11444	11444	11444	11444	11274
New York	4232	4863	4863	4888	4888	4888	4888	4888	4888	4888	4888
NEPOOL	6118	6556	6556	6556	6556	6556	6556	6556	6556	6556	6386
SERC	29250	29221	30391	30461	30461	30461	31631	31631	32843	32843	34055
Florida	3823	3823	3823	3823	3823	3823	3823	3823	3823	3823	3823
Southern	5510	5481	5481	5551	5551	5551	5551	5551	5551	5551	5551
TVA	5491	5491	6661	6661	6661	6661	7831	7831	9043	9043	10255
VACAR	14426	14426	14426	14426	14426	14426	14426	14426	14426	14426	14426
SPP	5867	5867	5867	5892	5892	5939	5964	5964	5964	5964	5964
Southeast	4733	4733	4733	4733	4733	4780	4780	4780	4780	4780	4780
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	1134	1134	1134	1159	1159	1159	1184	1184	1184	1184	1184
WSCC-US	10755	10755	10755	10755	10755	10755	10755	10755	10755	10755	10755
NW Power Pool	2199	2199	2199	2199	2199	2199	2199	2199	2199	2199	2199
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780	2780
Calif-So. Nev	5776	5776	5776	5776	5776	5776	5776	5776	5776	5776	5776
TOTAL(U.S.)	98759	99844	100262	101532	101578	101625	102820	102820	104032	104032	105007
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	11906	13707	14588	15466	15461	15456	15456	15456	15456	15456	15456
New Brunswick	635	635	635	635	635	635	635	635	635	635	635
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	10594	12402	13283	14164	14164	14164	14164	14164	14164	14164	14164
Quebec	677	670	670	667	662	657	657	657	657	657	657
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	11906	13707	14588	15466	15461	15456	15456	15456	15456	15456	15456
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	110665	113551	114850	116998	117039	117081	118276	118276	119488	119488	120463
ASCC	0	0	0	0	0	0	0	0	0	0	0

Hydro Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	648	648	648	653	653	653	653	653	653	653	653
ERCOT	409	409	409	409	409	409	409	409	409	409	409
MAAC	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048
MAIN	545	544	544	544	544	544	544	544	546	546	531
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	331	331	331	331	331	331	331	331	331	331	331
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	214	213	213	213	213	213	213	213	215	215	200
MAPP-US	2931	2948	2803	2720	2720	2720	2730	2730	2730	2730	2730
NPCC-US	5474	5456	5456	5456	5447	5445	5495	5830	5830	5827	5827
New York	4038	4040	4040	4040	4031	4029	4079	4414	4414	4414	4414
NEPOOL	1436	1416	1416	1416	1416	1416	1416	1416	1416	1413	1413
SERC	11386	11339	11339	11339	11339	11339	11339	11339	11339	11339	11339
Florida	47	47	47	47	47	47	47	47	47	47	47
Southern	3841	3794	3794	3794	3794	3794	3794	3794	3794	3794	3794
TVA	4652	4563	4563	4563	4563	4563	4563	4563	4563	4563	4563
VACAR	2846	2935	2935	2935	2935	2935	2935	2935	2935	2935	2935
SPP	2494	2494	2494	2494	2511	2670	2670	2670	2670	2670	2670
Southeast	87	87	87	87	104	104	104	104	104	104	104
West Central	2391	2391	2391	2391	2391	2550	2550	2550	2550	2550	2550
Northern	16	16	16	16	16	16	16	16	16	16	16
WSCC-US[a]	47254	42086	42314	42654	42828	42900	42927	43112	43173	43180	43182
NW Power Pool	33716	28038	28067	28215	28263	28327	28356	28430	28464	28464	28464
Rocky Mtn	2411	2442	2495	2510	2510	2510	2510	2510	2510	2510	2510
Ariz-N. Mex	807	862	860	987	1023	1025	1025	1025	1025	1025	1025
Calif-So. Nev	10276	9827	9975	10025	10115	10107	10119	10230	10257	10264	10266
TOTAL(U.S.)	72189	66972	67055	67317	67499	67728	67815	68335	68398	68402	68389
Canada											
MAPP-CAN	4806	5190	5587	5720	5720	5720	5720	5720	5720	5720	5850
NPCC-CAN	28110	30753	32450	32541	33983	35062	35948	36888	38025	40283	40660
New Brunswick	878	878	878	878	878	878	878	878	878	878	878
Nova Scotia	392	392	392	392	392	392	392	392	392	392	392
Ontario	6171	6169	6165	6170	6180	6231	6553	6553	6925	7603	7603
Quebec	20669	23314	25015	25101	26533	27561	28125	29065	29830	31410	31787
WSCC-CAN	11125	11083	11083	11083	11083	11083	11164	11164	11164	11164	11164
TOTAL(Canada)	44041	47026	49120	49344	50786	51865	52832	53772	54909	57167	57674
Mexico											
WSCC-MEX	0	0	0	0	60	60	60	60	60	60	60
NERC-Total	116230	113998	116175	116661	118345	119653	120707	122167	123367	125629	126123
ASCC	49	157	157	157	157	157	157	157	157	157	157

[a] Sum of the subregional capacity may not equal the WSCC-U.S. totals because subregional peak demands on which capacity is based may occur in different months than the coincident WSCC-U.S. peak.

Table 11

Pumped Storage Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	3582	3582	3582	3582	3582	3582	3582	3582	3582	3582	3582
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	1280	1280	1280	1280	1280	1280	1280	1280	1280	1280	1280
MAIN	300	350	350	350	350	350	350	350	350	350	350
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	300	350	350	350	350	350	350	350	350	350	350
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	100	100
NPCC-US	2687	2719	2719	2719	2719	2719	2719	2719	2719	2719	2719
New York	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040
NEPOOL	1647	1679	1679	1679	1679	1679	1679	1679	1679	1679	1679
SERC	4155	4556	5921	5921	5921	6769	6769	6769	6769	6769	6769
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	211	612	762	762	762	1610	1610	1610	1610	1610	1610
TVA	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532
VACAR	2412	2412	3627	3627	3627	3627	3627	3627	3627	3627	3627
SPP	260	260	260	260	260	260	260	260	260	260	260
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	260	260	260	260	260	260	260	260	260	260	260
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US[a]	3697	3611	3628	3651	3725	3789	3762	3773	3782	3762	3761
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	368	368	368	368	432	432	432	432	432	432	432
Ariz-N. Mex	148	148	148	148	162	162	162	162	167	167	167
Calif-So. Nev	3181	3095	3112	3135	3126	3190	3163	3174	3183	3163	3162
TOTAL(U.S.)	15961	16358	17740	17763	17837	18749	18722	18733	18742	18822	18821
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	15961	16358	17740	17763	17837	18749	18722	18733	18742	18822	18821
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Sum of the subregional capacity may not equal the WSCC-U.S. totals because subregional peak demands on which capacity is based may occur in different months than the coincident WSCC-U.S. peak.

Table 12

Geothermal Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US	1807	1759	1759	1759	1759	1759	1759	1759	1759	1759	1759
NW Power Pool	24	31	31	31	31	31	31	31	31	31	31
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	1783	1728	1728	1728	1728	1728	1728	1728	1728	1728	1728
TOTAL(U.S.)	1807	1759	1759	1759	1759	1759	1759	1759	1759	1759	1759
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	575	575	575	613	613	613	651	651	651	651	651
NERC-Total	2382	2334	2334	2372	2372	2372	2410	2410	2410	2410	2410
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 13

Oil-Fired Generating Capacity[a] - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	4218	4217	4126	4034	4263	4609	4951	5411	5501	5591	5699
ERCOT	39	39	39	39	39	39	39	39	39	39	39
MAAC	12123	12194	12159	12160	12029	12029	12028	12026	12025	12025	12025
MAIN	4518	4513	4513	4513	4513	4513	4526	4526	4526	4526	4520
Cmnwlth Edison	3162	3162	3162	3162	3162	3162	3175	3175	3175	3175	3175
East Missouri	538	538	538	538	538	538	538	538	538	538	538
S Cent Illinois	493	488	488	488	488	488	488	488	488	488	488
Wis-Upper Mich	325	325	325	325	325	325	325	325	325	325	319
MAPP-US	3104	3216	3201	3201	3251	3202	3272	3272	3272	3352	3352
NPCC-US	15185	15057	14896	14592	14493	14493	14462	14462	14390	14334	14334
New York	7225	7225	7225	7225	7225	7225	7225	7225	7225	7225	7225
NEPOOL	7960	7832	7671	7367	7268	7268	7237	7237	7165	7109	7109
SERC	16366	16847	16390	16698	17410	18377	18611	18858	19878	20125	20589
Florida	10845	11325	10853	11161	11441	11438	11438	11435	11705	11702	11916
Southern	1155	1156	1171	1171	1171	1171	1155	1155	1155	1155	1155
TVA	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464
VACAR	2902	2902	2902	2902	3334	4304	4554	4804	5554	5804	6054
SPP	1384	1404	1404	1404	1404	1224	1236	1236	1236	1236	1236
Southeast	221	221	221	221	221	221	221	221	221	221	221
West Central	14	14	14	14	14	14	14	14	14	14	14
Northern	1149	1169	1169	1169	1169	989	1001	1001	1001	1001	1001
WSCC-US	1027	1036	1036	1036	1036	1036	1036	1036	1036	1036	1036
NW Power Pool	277	277	277	277	277	277	277	277	277	277	277
Rocky Mtn	217	217	217	217	217	217	217	[illegible]7	217	217	217
Ariz-N. Mex	55	55	55	55	55	55	55	55	55	55	55
Calif-So. Nev	478	487	487	487	487	487	487	487	487	487	487
TOTAL(U.S.)	57964	58523	57764	57677	58438	59522	60161	60866	61903	62264	62830
Canada											
MAPP-CAN	3	3	3	3	3	3	3	3	3	3	3
NPCC-CAN	5028	5027	5449	5450	5451	5349	5600	5601	5752	5752	5903
New Brunswick	1431	1431	1851	1851	1851	1748	1898	1898	2048	2048	2198
Nova Scotia	504	504	504	504	504	504	604	604	604	604	604
Ontario	2469	2462	2462	2462	2462	2462	2462	2462	2462	2462	2462
Quebec	624	630	632	633	634	635	636	637	638	638	639
WSCC-CAN	99	99	99	99	99	99	99	99	99	99	99
TOTAL(Canada)	5130	5129	5551	5552	5553	5451	5702	5703	5854	5854	6005
Mexico											
WSCC-MEX	455	755	755	755	755	755	755	755	755	755	755
NERC-Total	63549	64407	64070	63984	64746	65728	66618	67324	68512	68873	69590
ASCC	174	174	174	177	177	177	177	177	177	177	177

---

[a] Includes steam, combustion turbine (including diesel), and combined cycle capacity. Excludes dual fuel-fired capacity.

Table 14

Oil-Fired Steam Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	2651	2651	2651	2651	2805	2926	3193	3578	3578	3578	3578
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	7689	7684	7646	7586	7460	7460	7460	7460	7460	7460	7460
MAIN	3310	3305	3305	3305	3305	3305	3305	3305	3305	3305	3305
Cmnwlth Edison	2698	2698	2698	2698	2698	2698	2698	2698	2698	2698	2698
East Missouri	196	196	196	196	196	196	196	196	196	196	196
S Cent Illinois	416	411	411	411	411	411	411	411	411	411	411
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	89	25	25	25	25	25	25	25	25	25	25
NPCC-US	12188	12066	12072	11768	11669	11669	11640	11640	11587	11534	11534
New York	5217	5217	5217	5217	5217	5217	5217	5217	5217	5217	5217
NEPOOL	6971	6849	6855	6551	6452	6452	6423	6423	6370	6317	6317
SERC	9167	9630	9130	9158	9158	9158	9158	9158	9158	9158	9372
Florida	8034	8494	7994	8022	8022	8022	8022	8022	8022	8022	8236
Southern	112	115	115	115	115	115	115	115	115	115	115
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021
SPP	3	3	3	3	3	3	3	3	3	3	3
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	3	3	3	3	3	3	3	3	3	3	3
WSCC-US	86	86	86	86	86	86	86	86	86	86	86
NW Power Pool	86	86	86	86	86	86	86	86	86	86	86
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	35183	35450	34918	34582	34511	34632	34870	35255	35202	35149	35363
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	4566	4572	4574	4575	4576	4474	4475	4476	4477	4477	4478
New Brunswick	1375	1375	1375	1375	1375	1272	1272	1272	1272	1272	1272
Nova Scotia	335	335	335	335	335	335	335	335	335	335	335
Ontario	2232	2232	2232	2232	2232	2232	2232	2232	2232	2232	2232
Quebec	624	630	632	633	634	635	636	637	638	638	639
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	4566	4572	4574	4575	4576	4474	4475	4476	4477	4477	4478
Mexico											
WSCC-MEX	286	586	586	586	586	586	586	586	586	586	586
NERC-Total	40035	40608	40078	39743	39673	39692	39931	40317	40265	40212	40427
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 15

Oil-Fired Combustion Turbine Generating Capacity[a] - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	1567	1566	1475	1383	1458	1683	1758	1833	1923	2013	2121
ERCOT	39	39	39	39	39	39	39	39	39	39	39
MAAC	4314	4390	4393	4454	4449	4449	4448	4446	4445	4445	4445
MAIN	1208	1208	1208	1208	1208	1208	1221	1221	1221	1221	1215
Cmnwlth Edison	464	464	464	464	464	464	477	477	477	477	477
East Missouri	342	342	342	342	342	342	342	342	342	342	342
S Cent Illinois	77	77	77	77	77	77	77	77	77	77	77
Wis-Upper Mich	325	325	325	325	325	325	325	325	325	325	319
MAPP-US	2956	3132	3117	3117	3167	3118	3188	3188	3188	3268	3268
NPCC-US	2997	2991	2824	2824	2824	2824	2822	2822	2803	2800	2800
New York	2008	2008	2008	2008	2008	2008	2008	2008	2008	2008	2008
NEPOOL	989	983	816	816	816	816	814	814	795	792	792
SERC	7157	7175	7218	7498	8210	9177	9411	9658	10678	10925	11175
Florida	2769	2789	2817	3097	3377	3374	3374	3371	3641	3638	3638
Southern	1043	1041	1056	1056	1056	1056	1040	1040	1040	1040	1040
TVA	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464
VACAR	1881	1881	1881	1881	2313	3283	3533	3783	4533	4783	5033
SPP	1381	1401	1401	1401	1401	1221	1233	1233	1233	1233	1233
Southeast	221	221	221	221	221	221	221	221	221	221	221
West Central	14	14	14	14	14	14	14	14	14	14	14
Northern	1146	1166	1166	1166	1166	986	998	998	998	998	998
WSCC-US	941	950	950	950	950	950	950	950	950	950	950
NW Power Pool	191	191	191	191	191	191	191	191	191	191	191
Rocky Mtn	217	217	217	217	217	217	217	217	217	217	217
Ariz-N. Mex	55	55	55	55	55	55	55	55	55	55	55
Calif-So. Nev	478	487	487	487	487	487	487	487	487	487	487
TOTAL(U.S.)	22560	22852	22625	22874	23706	24669	25070	25390	26480	26894	27246
Canada											
MAPP-CAN	3	3	3	3	3	3	3	3	3	3	3
NPCC-CAN	462	455	875	875	875	875	1125	1125	1275	1275	1425
New Brunswick	56	56	476	476	476	476	626	626	776	776	926
Nova Scotia	169	169	169	169	169	169	269	269	269	269	269
Ontario	237	230	230	230	230	230	230	230	230	230	230
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	99	99	99	99	99	99	99	99	99	99	99
TOTAL(Canada)	564	557	977	977	977	977	1227	1227	1377	1377	1527
Mexico											
WSCC-MEX	169	169	169	169	169	169	169	169	169	169	169
NERC-Total	23293	23578	23771	24020	24852	25815	26466	26786	28026	28440	28942
ASCC	174	174	174	177	177	177	177	177	177	177	177

---

[a] Includes diesel capacity.

Table 16

Oil-Fired Combined Cycle Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	120	120	120	120	120	120	120	120	120	120	120
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	59	59	59	59	59	59	59	59	59	59	59
NPCC-US	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	42	42	42	42	42	42	42	42	42	42	42
Florida	42	42	42	42	42	42	42	42	42	42	42
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US	0	0	0	0	0	0	0	0	0	0	0
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	221	221	221	221	221	221	221	221	221	221	221
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	221	221	221	221	221	221	221	221	221	221	221
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 17

Gas-Fired Total Generating Capacity[a] - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	1924	1977	2349	2426	2913	3460	3677	4104	4519	4924	5114
ERCOT	24719	24650	24650	24741	24872	25240	25243	25863	26487	26665	26569
MAAC	5351	5936	6074	6318	6618	6979	7513	8185	9316	9854	10392
MAIN	315	316	319	409	722	722	883	883	1043	1099	1099
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	37	37	37	37	37	37	37	37	37	37	37
S Cent Illinois	30	30	30	30	166	166	166	166	326	382	382
Wis-Upper Mich	248	249	252	342	519	519	680	680	680	680	680
MAPP-US	836	1125	1144	1194	1194	1129	1129	1179	1179	1179	1229
NPCC-US	751	758	758	758	758	758	758	758	758	758	758
New York	520	520	520	520	520	520	520	520	520	520	520
NEPOOL	231	238	238	238	238	238	238	238	238	238	238
SERC	8524	8491	8787	9953	11380	12697	13657	14433	15614	16569	17576
Florida	7234	7234	7279	8246	8631	9155	9400	9462	9664	9984	10625
Southern	1265	1232	1483	1682	2724	3517	4232	4946	5925	6560	6926
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	25	25	25	25	25	25	25	25	25	25	25
SPP	13231	13349	13394	13650	13660	13660	13741	14054	14422	14522	14644
Southeast	3133	3192	3158	3414	3414	3414	3361	3361	3361	3461	3461
West Central	8561	8620	8620	8620	8620	8620	8655	8891	9188	9188	9300
Northern	1537	1537	1616	1616	1626	1626	1725	1802	1873	1873	1883
WSCC-US	378	467	467	467	497	838	838	892	1102	1102	1102
NW Power Pool	12	12	12	12	12	12	12	12	12	222	222
Rocky Mtn	8	8	8	8	38	379	379	433	433	433	433
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	358	447	447	447	447	447	447	447	447	447	447
TOTAL(U.S.)	56029	57069	57942	59916	62614	65483	67439	70351	74440	76672	78483
Canada											
MAPP-CAN	357	382	362	332	332	416	416	416	416	416	428
NPCC-CAN	1065	1065	1065	1516	1869	1874	1874	2122	2122	2122	2122
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	588	588	588	588	588	588	588	588	588	588	588
Quebec	477	477	477	928	1281	1286	1286	1534	1534	1534	1534
WSCC-CAN	2157	2083	2083	2083	2117	2117	2111	2128	2128	2128	2128
TOTAL(Canada)	3579	3530	3510	3931	4318	4407	4401	4666	4666	4666	4678
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	59608	60599	61452	63847	66932	69890	71840	75017	79106	81338	83161
ASCC	494	494	487	487	487	487	487	487	487	487	487

---

[a] Includes steam, combustion turbine (including diesel), and combined cycle capacity. Excludes dual fuel-fired capacity.

Table 18

Gas-Fired Steam Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	444	444	444	444	444	444	444	444	444	444	444
ERCOT	24237	24168	24168	24259	24182	24392	24295	24295	24164	24018	23640
MAAC	2121	2121	2121	2121	2121	1551	1551	1551	1551	1551	1551
MAIN	54	55	58	58	58	58	58	58	58	58	58
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	54	55	58	58	58	58	58	58	58	58	58
MAPP-US	286	456	456	456	456	456	456	456	456	456	456
NPCC-US	475	475	475	475	475	475	475	475	475	475	475
New York	475	475	475	475	475	475	475	475	475	475	475
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	6111	6077	6053	6694	6694	6694	6674	6674	6674	6674	6562
Florida	5045	5045	5021	5662	5662	5662	5642	5642	5642	5642	5816
Southern	1066	1032	1032	1032	1032	1032	1032	1032	1032	1032	746
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	11492	11551	11517	11773	11773	11773	11728	12031	12193	12193	12305
Southeast	2980	3039	3005	3261	3261	3261	3216	3216	3216	3216	3216
West Central	7380	7380	7380	7380	7380	7380	7380	7616	7778	7778	7890
Northern	1132	1132	1132	1132	1132	1132	1132	1199	1199	1199	1199
WSCC-US	366	455	455	455	455	796	796	796	796	796	796
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	8	8	8	8	8	349	349	349	349	349	349
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	358	447	447	447	447	447	447	447	447	447	447
TOTAL(U.S.)	45586	45802	45747	46735	46658	46639	46477	46780	46811	46665	46287
Canada											
MAPP-CAN	95	220	220	220	220	220	220	220	220	220	220
NPCC-CAN	588	588	588	588	588	588	588	588	588	588	588
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	588	588	588	588	588	588	588	588	588	588	588
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	1938	1860	1860	1860	1860	1860	1862	1892	1892	1892	1892
TOTAL(Canada)	2621	2668	2668	2668	2668	2668	2670	2700	2700	2700	2700
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	48207	48470	48415	49403	49326	49307	49147	49480	49511	49365	48987
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 19

Gas-Fired Combustion Turbine Generating Capacity[a] - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	1455	1508	1880	1957	2177	2724	2941	3368	3783	4188	4378
ERCOT	456	456	456	456	664	822	922	922	1057	1297	1505
MAAC	2822	3290	3290	3333	3633	3833	3833	4233	4433	4433	4433
MAIN	261	261	261	351	608	608	769	769	929	929	929
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	37	37	37	37	37	37	37	37	37	37	37
S Cent Illinois	30	30	30	30	110	110	110	110	270	270	270
Wis-Upper Mich	194	194	194	284	461	461	622	622	622	622	622
MAPP-US	537	644	663	713	713	648	648	698	698	698	748
NPCC-US	276	283	283	283	283	283	283	283	283	283	283
New York	45	45	45	45	45	45	45	45	45	45	45
NEPOOL	231	238	238	238	238	238	238	238	238	238	238
SERC	1864	1865	2185	2612	3470	4328	5308	5892	6746	7481	8088
Florida	1640	1640	1709	1937	1937	2002	2267	2137	2052	2152	2107
Southern	199	200	451	650	1508	2301	3016	3730	4669	5304	5956
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	25	25	25	25	25	25	25	25	25	25	25
SPP	841	900	979	979	989	989	1016	1026	1161	1261	1271
Southeast	8	8	8	8	8	8	0	0	0	100	100
West Central	428	487	487	487	487	487	522	522	657	657	657
Northern	405	405	484	484	494	494	494	504	504	504	514
WSCC-US	12	12	12	12	42	42	42	96	96	96	96
NW Power Pool	12	12	12	12	12	12	12	12	12	12	12
Rocky Mtn	0	0	0	0	30	30	30	84	84	84	84
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	8524	9219	10009	10696	12579	14277	15762	17287	19186	20666	21731
Canada											
MAPP-CAN	262	162	142	112	112	196	196	196	196	196	208
NPCC-CAN	477	477	477	928	1281	1286	1286	1534	1534	1534	1534
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	477	477	477	928	1281	1286	1286	1534	1534	1534	1534
WSCC-CAN	219	223	223	223	257	257	249	236	236	236	236
TOTAL(Canada)	958	862	842	1263	1650	1739	1731	1966	1966	1966	1978
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	9482	10081	10851	11959	14229	16016	17493	19253	21152	22632	23709
ASCC	307	307	300	300	300	300	300	300	300	300	300

[a] Includes diesel capacity.

Table 20

Gas-Fired Combined Cycle Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	25	25	25	25	292	292	292	292	292	292	292
ERCOT	26	26	26	26	26	26	26	646	1266	1350	1424
MAAC	408	525	663	864	864	1595	2129	2401	3332	3870	4408
MAIN	0	0	0	0	56	56	56	56	56	112	112
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	56	56	56	56	56	112	112
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	13	25	25	25	25	25	25	25	25	25	25
NPCC-US	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	549	549	549	647	1216	1675	1675	1867	2194	2414	2926
Florida	549	549	549	647	1032	1491	1491	1683	1970	2190	2702
Southern	0	0	0	0	184	184	184	184	224	224	224
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	898	898	898	898	898	898	997	997	1068	1068	1068
Southeast	145	145	145	145	145	145	145	145	145	145	145
West Central	753	753	753	753	753	753	753	753	753	753	753
Northern	0	0	0	0	0	0	99	99	170	170	170
WSCC-US[a]	0	0	0	0	0	0	0	0	210	210	210
NW Power Pool	0	0	0	0	0	0	0	0	0	210	210
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	1919	2048	2186	2485	3377	4567	5200	6284	8443	9341	10465
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	1919	2048	2186	2485	3377	4567	5200	6284	8443	9341	10465
ASCC	187	187	187	187	187	187	187	187	187	187	187

---

[a] Sum of the subregional capacity may not equal the WSCC-U.S. totals because subregional peak demands on which capacity is based may occur in different months than the coincident WSCC-U.S. peak.

Table 21

Dual Fuel-Fired Generating Capacity[a] - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	7968	7969	8009	8033	8057	8074	8074	8074	8037	8039	8471
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	1474	1470	1464	1689	1914	2289	2700	3405	4071	4771	5712
Cmnwlth Edison	569	569	569	569	569	569	683	1163	1643	2043	2523
East Missouri	277	277	277	277	277	277	277	352	352	502	727
S Cent Illinois	281	277	277	277	277	277	352	427	502	652	802
Wis-Upper Mich	347	347	341	566	791	1166	1388	1463	1574	1574	1660
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	11751	11722	11745	11745	11730	11730	11730	11730	11730	11730	11730
New York	9378	9337	9360	9360	9360	9360	9360	9360	9360	9360	9360
NEPOOL	2373	2385	2385	2385	2370	2370	2370	2370	2370	2370	2370
SERC	3088	3093	3298	3641	3959	4358	4970	4970	5276	5582	6380
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	177	177	177	177	177	177	177	177	177	177	177
TVA	602	602	602	602	602	602	602	602	602	602	602
VACAR	2309	2314	2519	2862	3180	3579	4191	4191	4497	4803	5601
SPP	16475	16479	16479	16479	16584	16978	17479	17876	18442	19240	19791
Southeast	13667	13671	13671	13671	13671	13671	13825	14042	14371	14812	15036
West Central	1684	1684	1684	1684	1684	1684	1684	1684	1784	2004	2074
Northern	1124	1124	1124	1124	1229	1623	1970	2150	2287	2424	2681
WSCC-US[b]	29309	29453	29511	29722	30192	30562	31252	31542	32178	32713	33087
NW Power Pool	1837	1847	1847	1847	1847	1917	1917	1977	1977	1977	1977
Rocky Mtn	480	480	480	480	480	480	480	480	480	480	480
Ariz-N. Mex	4685	4685	4685	4685	4755	4755	4755	4859	5139	5279	5429
Calif-So. Nev	22307	22450	22508	22719	23119	23419	24109	24235	24591	24986	25210
TOTAL(U.S.)	70065	70186	70506	71309	72436	73991	76205	77597	79734	82075	85171
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	116	116	116	116	116	116	116
TOTAL(Canada)	0	0	0	0	116	116	116	116	116	116	116
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	70065	70186	70506	71309	72552	74107	76321	77713	79850	82191	85287
ASCC	297	297	297	297	297	297	297	297	297	297	297

[a] Includes steam, combustion turbine (including diesel), and combined cycle capacity. Excludes dual fuel-fired capacity.

[b] Sum of the subregional capacity may not equal the WSCC-U.S. totals because subregional peak demands on which capacity is based may occur in different months than the coincident WSCC-U.S. peak.

Table 22

Dual Fuel-Fired Steam Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	5529	5532	5572	5572	5572	5572	5572	5572	5535	5535	5535
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	481	481	475	475	475	475	475	475	475	475	437
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	265	265	265	265	265	265	265	265	265	265	265
S Cent Illinois	138	138	138	138	138	138	138	138	138	138	138
Wis-Upper Mich	78	78	72	72	72	72	72	72	72	72	34
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	9436	9409	9432	9432	9417	9417	9417	9417	9417	9417	9417
New York	7696	7696	7719	7719	7719	7719	7719	7719	7719	7719	7719
NEPOOL	1740	1713	1713	1713	1698	1698	1698	1698	1698	1698	1698
SERC	1089	995	995	995	995	995	995	995	995	995	995
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	177	177	177	177	177	177	177	177	177	177	177
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	912	818	818	818	818	818	818	818	818	818	818
SPP	15488	15487	15487	15487	15487	15456	15610	15827	16156	16597	16808
Southeast	13271	13271	13271	13271	13271	13271	13425	13642	13971	14412	14636
West Central	1622	1622	1622	1622	1622	1622	1622	1622	1622	1622	1622
Northern	595	594	594	594	594	563	563	563	563	563	550
WSCC-US	22476	22476	22534	22612	22612	22612	22932	23181	23313	23708	23708
NW Power Pool	542	542	542	542	542	542	542	602	602	602	602
Rocky Mtn	264	264	264	264	264	264	264	264	264	264	264
Ariz-N. Mex	2365	2365	2365	2365	2365	2365	2365	2428	2428	2428	2428
Calif-Sc. Nev	19305	19305	19363	19441	19441	19441	19761	19887	20019	20414	20414
TOTAL(U.S.)	54499	54380	54495	54573	54558	54527	55001	55467	55891	56727	56900
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	54499	54380	54495	54573	54558	54527	55001	55467	55891	56727	56900
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 23

Dual Fuel-Fired Combustion Turbine Generating Capacity[a] - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	2009
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	993	989	989	1214	1439	1814	2225	2930	3596	4296	5275
Cmnwlth Edison	569	569	569	569	569	569	683	1163	1643	2043	2523
East Missouri	12	12	12	12	12	12	12	87	87	237	462
S Cent Illinois	143	139	139	139	139	139	214	289	364	514	664
Wis-Upper Mich	269	269	269	494	719	1094	1316	1391	1502	1502	1626
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	1858	1851	1851	1851	1851	1851	1851	1851	1851	1851	1851
New York	1682	1641	1641	1641	1641	1641	1641	1641	1641	1641	1641
NEPOOL	176	210	210	210	210	210	210	210	210	210	210
SERC	1722	1811	1811	2154	2472	2871	3483	3483	3789	4095	4893
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	602	602	602	602	602	602	602	602	602	602	602
VACAR	1120	1209	1209	1552	1870	2269	2881	2881	3187	3493	4291
SPP	697	702	702	702	807	1067	1414	1429	1666	1973	2113
Southeast	167	171	171	171	171	171	171	171	171	171	171
West Central	62	62	62	62	62	62	62	62	162	332	402
Northern	468	469	469	469	574	834	1181	1196	1333	1470	1540
WSCC-US[b]	4367	4411	4411	4314	4314	4454	4594	4594	4874	5014	4944
NW Power Pool	802	805	805	805	805	875	875	875	875	875	875
Rocky Mtn	216	216	216	216	216	216	216	216	216	216	216
Ariz-N. Mex	1480	1480	1480	1480	1550	1550	1550	1550	1830	1970	1900
Calif-So. Nev	1869	1912	1912	1815	1745	1815	1955	1955	1955	1955	1955
TOTAL(U.S.)	11374	11501	11501	11972	12620	13794	15304	16024	17513	18966	21085
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	116	116	116	116	116	116	116
TOTAL(Canada)	0	0	0	0	116	116	116	116	116	116	116
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	11374	11501	11501	11972	12736	13910	15420	16140	17629	19082	21201
ASCC	155	155	155	155	155	155	155	155	155	155	155

[a] Includes diesel capacity.

[b] Sum of the subregional capacity may not equal the WSCC-U.S. totals because subregional peak demands on which capacity is based may occur in different months than the coincident WSCC-U.S. peak.

Table 24

Dual Fuel-Fired Combined Cycle Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	702	700	700	724	748	765	765	765	765	767	927
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	457	462	462	462	462	462	462	462	462	462	462
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	457	462	462	452	462	462	462	462	462	462	462
SERC	277	287	492	492	492	492	492	492	492	492	492
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	277	287	492	492	492	492	492	492	492	492	492
SPP	290	290	290	290	290	455	455	620	620	670	870
Southeast	229	229	229	229	229	229	229	229	229	229	229
West Central	0	0	0	0	0	0	0	0	0	50	50
Northern	61	61	61	61	61	226	226	391	391	391	591
WSCC-US[a]	2466	2566	2566	2796	3266	3496	3726	3767	3991	3991	4435
NW Power Pool	493	500	500	500	500	500	500	500	500	500	500
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	840	840	840	840	840	840	840	881	881	881	1101
Calif-So. Nev	1133	1233	1233	1463	1933	2163	2393	2393	2617	2617	2841
TOTAL(U.S.)	4192	4305	4510	4764	5258	5670	5900	6106	6330	6382	7186
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	4192	4305	4510	4764	5258	5670	5900	6106	6330	6382	7186
ASCC	142	142	142	142	142	142	142	142	142	142	142

---

[a] Sum of the subregional capacity may not equal the WSCC-U.S. totals because subregional peak demands on which capacity is based may occur in different months than the coincident WSCC-U.S. peak.

Table 25

Other (Utility) Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	160	465	525	910	970	1245	1305
ERCOT	0	0	0	0	0	400	500	500	600	1000	1100
MAAC	54	338	338	488	204	204	204	219	219	337	455
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	134	157	157	157	262	472	682	892	997	1102	1312
NPCC-US	52	52	52	52	52	52	52	52	52	52	52
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	52	52	52	52	52	52	52	52	52	52	52
SERC	0	0	0	0	0	0	0	0	907	2207	3414
Florida	0	0	0	0	0	0	0	0	907	1607	2514
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	600	900
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	191	191	186	186	186	196	196	196	196	196	196
Southeast	9	9	9	9	9	9	9	9	9	9	9
West Central	70	70	70	70	70	80	80	80	80	80	80
Northern	112	112	107	107	107	107	107	107	107	107	107
WSCC-US	73	126	167	169	173	200	851	962	1197	1298	1598
NW Power Pool	62	100	100	100	100	100	100	109	109	109	109
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	2	2	2	2	10	10	10
Calif-So. Nev	11	26	67	69	71	98	749	851	1078	1179	1479
TOTAL(U.S.)	504	864	900	1052	1037	1989	3010	3731	5138	7437	9432
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	299	299	299	299	299	299
New Brunswick	0	0	0	0	0	299	299	299	299	299	299
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	100	300	600
TOTAL(Canada)	0	0	0	0	0	299	299	299	399	599	899
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	504	864	900	1052	1037	2288	3309	4030	5537	8036	10331
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 26

Non-Utility Generating Capacity - Summer - MW

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	1155	1191	2200	2399	2617	2839	3179	3214	3244	3249	3254
ERCOT[a]	3296	3196	3046	3046	2471	1776	1699	1699	1574	1164	1090
MAAC	1417	2205	2455	3231	4378	4558	4858	4858	4858	4858	4858
MAIN	15	26	32	33	36	36	39	85	89	89	140
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	2	1	1	2	2	2	5	5	5	5	10
Wis-Upper Mich	13	25	31	31	34	34	34	80	84	84	130
MAPP-US	436	371	371	371	391	391	391	391	391	391	391
NPCC-US	2275	2991	4960	6272	7495	8154	8154	8138	8099	8085	8051
New York	817	1056	2422	3639	4763	5425	5425	5422	5422	5418	5418
NEPOOL	1458	1935	2538	2633	2732	2729	2729	2716	2677	2667	2633
SERC	1706	2372	3389	4261	5057	5488	5905	6069	6208	6249	6262
Florida	62	136	305	663	1133	1488	1889	1977	2040	2083	2096
Southern	459	459	459	459	459	459	459	459	459	459	459
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	1185	1777	2625	3139	3465	3541	3557	3633	3709	3707	3707
SPP	151	451	451	451	451	451	451	551	551	551	551
Southeast	11	11	11	11	11	11	11	11	11	11	11
West Central	110	410	410	410	410	410	410	510	510	510	510
Northern	30	30	30	30	30	30	30	30	30	30	30
WSCC-US[b]	7705	8050	8728	9745	10254	10479	10625	10638	10692	10705	10755
NW Power Pool	787	875	1061	1314	1371	1398	1503	1523	1546	1567	1581
Rocky Mtn	175	225	297	553	703	773	853	853	853	853	853
Ariz-N. Mex	360	360	360	360	360	360	364	368	382	386	400
Calif-So. Nev	6383	6618	7038	7536	7834	7911	7920	7922	7925	7927	7930
TOTAL(U.S.)[a]	18156	20853	25632	29809	33150	34172	35301	35643	35706	35341	35352
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	110	408	703	1012	1211	1328	1469	1608	1752	1897	2043
New Brunswick	10	10	10	10	10	10	10	10	10	10	10
Nova Scotia	0	0	20	30	50	50	50	50	50	50	50
Ontario	84	328	457	637	761	878	1019	1158	1302	1447	1593
Quebec	16	70	216	335	390	390	390	390	390	390	390
WSCC-CAN	0	0	0	97	294	635	635	635	635	635	635
TOTAL(Canada)	110	408	703	1109	1505	1963	2104	2243	2387	2532	2678
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	18266	21261	26335	30918	34655	36135	37405	37886	38093	37873	38030
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Reflects projected expiration of NUG contracts totaling 2,106 MW over the 1991-2000 period.

[b] Sum of the subregional capacity may not equal the WSCC-U.S. totals because subregional peak demands on which capacity is based may occur in different months than the coincident WSCC-U.S. peak.

Electricity Production (Annual)

Projections 1991-2000

Annual electricity production in the United States is projected to increase by 535 billion kWh (18%) over the 1991-2000 period. Electricity production from coal is expected to account for almost half of this increase while non-utility generation accounts for nearly 20%. In Canada, electricity production is projected to increase by more than 100 billion kWh (25%). Hydroelectric generation accounts for almost half of this increase and nuclear about 25%.

Figure 4

Electricity Production by Fuel (% Total)

	1991						2000					
	Coal	Nuclear	Hydro	Oil/ Gas	Other (Util)	NUGs	Coal	Nuclear	Hydro	Oil/ Gas	Other (Util)	NUGs
ECAR	87.1	10.3	0.6	0.4	0.0	1.6	86.1	8.7	0.5	1.0	0.0	3.7
ERCOT	42.9	9.3	0.3	36.4	0.1	10.6	46.7	10.9	0.2	33.6	2.9	5.6
MAAC	47.6	35.9	1.8	8.2	0.6	6.0	44.5	29.6	1.4	12.5	0.4	11.5
MAIN	52.4	45.6	1.4	0.6	0.0	0.1	56.1	40.1	0.9	2.5	0.2	0.1
MAPP-U.S.	72.9	18.9	7.3	0.6	0.3	0.0	72.0	17.9	8.7	1.1	0.3	0.0
NPCC-U.S.	19.9	28.9	11.6	33.0	0.0	6.6	18.8	26.5	11.1	25.7	0.0	17.9
SERC	59.1	26.9	4.9	7.3	0.0	1.8	57.3	27.6	3.9	7.2	0.0	4.0
SPP	55.8	16.5	2.2	23.3	0.1	2.0	55.8	13.8	2.0	26.6	0.1	1.7
WSCC-U.S.	35.6	12.1	29.9	9.5	2.5	10.3	34.1	10.5	26.9	14.2	2.2	12.0
United States	54.1	20.9	8.4	11.6	0.5	4.5	53.5	19.5	7.4	12.5	0.7	6.5
MAPP-Canada	28.7	0.0	69.6	1.7	0.0	0.0	29.9	0.0	68.8	1.4	0.0	0.0
NPCC-Canada	13.0	27.6	55.2	3.4	0.0	0.9	10.6	28.4	54.2	2.7	0.5	3.6
WSCC-Canada	41.4	0.0	54.3	4.2	0.0	0.0	38.0	0.0	47.8	10.4	1.8	2.0
Canada	20.1	19.2	56.7	3.3	0.0	0.6	17.7	20.8	54.1	4.2	0.8	2.9

Percentages may not add due to rounding.

Definitions

Hydro — Electricity production by conventional hydro. Projections are generally based on adverse hydro conditions.

Net Energy for Load — A combination of internal utility generation, non-utility generation, pumped storage generation/load, and electricity purchases from outside the Region.

Non-Utility Generators (NUGs) — Facilities for generating electricity that operate connected to an electric utility system in which total utility ownership is less than 50%. Sale/leaseback arrangements are not reported as NUGs, particularly because the utility involved continues to operate the unit.

Figure 5

Components of Net Energy for Load

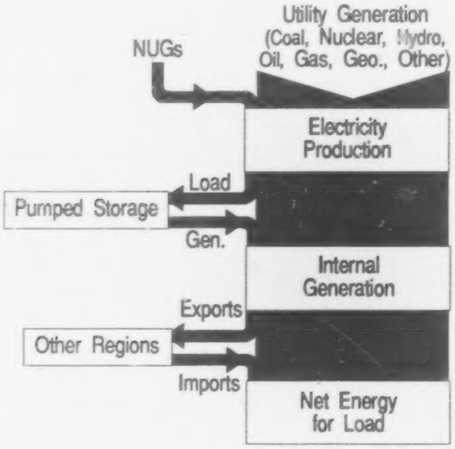

Utility Generation
(Coal, Nuclear, Hydro, Oil, Gas, Geo., Other)
NUGs
Electricity Production
Load
Pumped Storage
Gen.
Internal Generation
Exports
Other Regions
Imports
Net Energy for Load

Table 27

Electricity Production by Fuel - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
Coal	1554265	1579317	1610804	1629908	1650755	1676751	1712007	1730675	1768416	1802531	1838566
Nuclear	573137	609817	620800	635700	642009	653760	648997	660536	663481	660444	670044
Hydro	273862	244277	247191	248100	248983	250033	251968	252354	252478	252554	252585
Oil	106731	95172	80008	73246	75977	77018	69689	73401	78434	84760	87723
Gas	259954	242290	246718	260308	271096	278099	301868	313633	322670	334639	340659
Geothermal	9852	12325	11561	11277	10688	10468	9926	9642	9208	8951	8737
Other(Utility)	3061	3951	4207	3754	4074	6159	6823	7221	9924	13438	15048
NUGs	108657	130539	158537	183081	199940	205134	212383	213476	215944	218357	222161
Electricity Production	2889519	2917688	2979826	3045374	3103522	3157422	3213661	3260938	3320555	3375674	3435523
Pump.Stor.Load(-)	21105	20451	22108	22000	22924	25819	25851	27887	27269	29424	28127
Pump.Stor.Gen.(+)	17853	16401	18016	18107	18928	21196	21179	22721	22333	24073	23090
Internal Generation	2886267	2913638	2975734	3041481	3099526	3152799	3208989	3255772	3315619	3370323	3430486
Imports-Exports	229	37094	46069	36991	35815	38929	45718	57561	58954	65708	66014
Net Energy for Load[a]	2886496	2950732	3021803	3081002	3139576	3199202	3262553	3322465	3385497	3450502	3513440
Canada											
Coal	78850	87878	91825	87016	91134	96190	96923	99293	103137	98117	96672
Nuclear	69207	83812	88768	100974	102002	100176	103617	103518	100302	107610	110395
Hydro	229158	247618	252027	253532	256197	261761	270749	276692	281268	289566	294770
Oil	11323	10245	10401	9419	9029	8623	9339	9831	10497	10305	10671
Gas	4259	4496	5048	5292	5977	7321	9416	10042	11142	11793	12053
Geothermal	0	0	0	0	0	0	0	0	0	0	0
Other(Utility)	41	0	0	0	776	2125	2132	2156	2608	3175	4121
NUGs	1745	2661	4727	7677	10199	11213	12178	13124	14043	15042	16059
Electricity Production[b]	394583	436710	452796	463910	475314	487409	504354	514656	522997	535608	544741
Imports-Exports	25912	9021	9316	11508	9718	9543	6093	5296	5814	3155	3735
Net Energy for Load	420495	445731	462112	475418	485032	496952	510447	519952	528811	538763	548476
Mexico											
Coal	0	0	0	0	0	600	1200	1500	2000	2400	3000
Nuclear	0	0	0	0	0	0	0	0	0	0	0
Hydro	0	0	0	0	65	100	130	130	130	130	130
Oil	1218	2214	2615	3000	3300	3208	2025	1076	1273	1633	1861
Gas	0	0	0	0	0	0	0	0	0	0	0
Geothermal	4476	4289	4327	4376	4490	4500	5000	5000	5000	5000	5000
Other(Utility)	0	0	0	0	0	0	0	0	0	0	0
NUGs	0	0	0	0	0	0	0	0	0	0	0
Electricity Production[b]	5694	6503	6942	7376	7855	8408	8355	7706	8403	9163	9991
Imports-Exports	-1492	-1927	-1929	-1927	-1927	-1927	-1288	0	0	0	0
Net Energy for Load	4202	4576	5013	5449	5928	6481	7067	7706	8403	9163	9991
ASCC											
Coal	352	351	356	361	366	371	376	381	386	391	396
Nuclear	0	0	0	0	0	0	0	0	0	0	0
Hydro	266	336	579	579	579	579	579	579	580	580	579
Oil	90	99	93	96	99	102	106	112	118	125	132
Gas	2831	2797	2606	2648	2705	2730	2776	2823	2875	2924	2983
Geothermal	0	0	0	0	0	0	0	0	0	0	0
Other(Utility)	0	0	0	0	0	0	0	0	0	0	0
NUGs	0	0	0	0	0	0	0	0	0	0	0
Electricity Production[c]	3539	3583	3634	3684	3749	3782	3837	3895	3959	4020	4090

[a] The U.S. portion of the Northwest Power Pool Area (NWPP) is projecting an energy deficiency under adverse hydro conditions for 1993 through 2000. Net Energy for Load for NWPP (U.S.), WSCC (U.S.), and NERC (U.S.) is greater, by the amount of that deficiency, than Electricity Production minus net Pumped Storage requirements plus net Import/Exports.

[b] No pumped storage. Electricity Production equals Internal Generation.

[c] No pumped storage, imports or exports. Electricity Production equals Internal Generation and Net Energy for Load.

Table 28

Electricity Production by Region - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	483482	484101	488849	496615	508251	515253	524865	529953	536999	544440	547609
ERCOT	209704	214040	220223	224416	229652	234688	241339	246692	253185	260750	267868
MAAC	202429	205989	218554	227502	233217	241476	246299	250377	254669	258994	263512
MAIN	194401	201270	203891	206701	211149	212466	218719	222919	225865	227550	231344
Cmnwlth Edison	83258	82505	84280	85475	85940	87640	88780	89545	91235	92465	93825
East Missouri	32636	35367	35161	35147	36483	36161	36916	37943	37644	37767	38877
S Cent Illinois	35128	37946	38017	38971	40585	40457	42268	43118	43804	44450	44897
Wis-Upper Mich	43379	45452	46433	47108	48141	48208	50755	52313	53182	52868	53745
MAPP-US	133927	134470	136707	138611	140382	141149	142494	144597	145743	147026	149089
NPCC-US	244040	243524	239097	241744	244598	246241	245871	248191	250346	254409	256766
New York	140328	145123	143002	144350	145149	144736	142571	143816	143836	145381	145406
NEPOOL	103712	98401	96095	97394	99449	101505	103300	104375	106510	109028	111360
SERC	609887	640376	664458	680879	697840	714978	731212	745638	764312	782244	801170
Florida	119912	125164	131382	138741	145197	151107	156419	157269	162639	167214	172412
Southern	172675	175927	181197	179544	179494	180603	182539	186349	191142	195623	197906
TVA	116769	126304	129270	133908	137703	141901	145487	148882	152162	155537	158908
VACAR	200531	212981	222609	228686	235446	241367	246767	253138	258369	263870	271944
SPP	264185	260024	263706	270122	274545	276971	282331	288684	292833	299024	307066
Southeast	118295	116029	117634	120122	121062	120813	122075	125163	126290	128418	130744
West Central	88278	86188	87256	90339	92144	94572	96818	99096	100859	102779	105195
Northern	57612	57807	58816	59661	61339	61586	63438	64425	65684	67827	71127
WSCC-US	547464	533894	544341	558784	563888	574200	580531	5838[illegible]	596603	601237	611099
NW Power Pool	235047	217567	222121	223939	224844	224424	227461	226336	227927	228587	229852
Rocky Mtn	42288	43023	44609	45539	46469	47028	47302	48070	49040	50019	50784
Ariz-N. Mex	72870	70790	72997	74208	75852	77804	79830	81401	82785	84249	86206
Calif-So. Nev	197259	202514	204614	215098	216723	224944	225938	228080	236851	238382	244257
TOTAL(U.S.)	2889519	2917688	2979826	3045374	3103522	3157422	3213661	3260938	3320555	3375674	3435523
Canada											
MAPP-CAN	36549	41159	41694	37942	39110	39972	40645	41336	42488	44025	45456
NPCC-CAN	265444	303867	316816	329752	337591	345467	359110	366582	371804	382734	389080
New Brunswick	15795	14965	14965	15531	17808	17961	18808	19214	19554	19973	20400
Nova Scotia	9078	9844	10281	10623	10890	11146	11413	11699	11987	12278	12594
Ontario	124128	146041	152609	158491	161913	165869	169741	171461	173637	176789	179241
Quebec	116443	133017	138961	145107	146980	150491	159148	164208	166626	173694	176845
WSCC-CAN	92590	91684	94286	96216	98613	101970	104599	106738	108705	108849	110205
TOTAL(Canada)	394583	436710	452796	463910	475314	487409	504354	514656	522997	535608	544741
Mexico											
WSCC-MEX	5694	6503	6942	7376	7855	8408	8355	7706	8403	9163	9991
NERC-Total	297719	301410	307020	319826	324670	336890	340429	344151	355607	358073	366135
ASCC	3539	3583	3634	3684	3749	3782	3837	3895	3959	4020	4090

Table 29

Electricity Production by Coal - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	428446	421493	427892	429640	441956	447078	454758	457747	463672	470807	471390
ERCOT	89190	91737	93415	94523	96959	102319	105788	106712	109106	113769	125189
MAAC	100958	98047	106444	106150	103996	109038	110405	110191	114462	114843	117258
MAIN	101848	107577	111267	113168	115122	116661	122710	124550	127625	129621	129874
Cmnwlth Edison	16624	18890	19675	19125	20185	20430	21555	22925	22685	23980	25000
East Missouri	22936	24278	25578	25969	25413	26467	27410	26995	28140	28240	27806
S Cent Illinois	31442	31627	32496	33922	34335	34844	36850	36436	37671	38442	37321
Wis-Upper Mich	30846	32782	33518	34152	35189	34920	36895	38194	39129	38959	39747
MAPP-US	97881	98073	97379	99726	100321	99003	101903	103362	103881	105844	107332
NPCC-US	47550	48385	46908	46561	47206	45835	46627	45969	47592	46997	48298
New York	30679	31346	29817	29292	29641	28024	28162	27286	28803	28000	29088
NEPOOL	16871	17039	17091	17269	17565	17811	18465	18683	18789	18997	19210
SERC	354506	378695	383280	391747	394751	401639	409974	419488	434832	449076	459238
Florida	54214	61061	60858	62920	63928	65507	67134	69522	76324	80494	86567
Southern	125414	128910	133852	132006	131071	132422	134233	137741	142120	145717	148066
TVA	80871	87527	83831	84036	84981	84287	81743	81004	82074	82437	82726
VACAR	94007	101197	104739	112785	114771	119423	126864	131221	134314	140428	141879
SPP	142139	145201	150077	153311	153730	156676	159299	162749	163826	166672	171434
Southeast	38956	41012	44707	45664	45120	47226	45901	47691	47174	47691	49679
West Central	55375	55310	56631	57631	57435	59187	60517	61501	63123	62646	62653
Northern	47808	48879	48739	50016	51175	50263	52881	53557	53529	56335	59102
WSCC-US	191747	190109	194142	195082	196714	198502	200543	199907	203420	204902	208553
NW Power Pool	73168	78549	80503	80396	80424	79409	80810	79744	80230	80005	80610
Rocky Mtn	35042	33757	34865	35364	35729	36144	35784	36044	36905	37821	38567
Ariz-N. Mex	47872	44255	45284	45978	46477	47670	48698	48860	50411	51061	52163
Calif-So. Nev	35665	33548	33490	33344	34084	35279	35251	35259	35874	36015	37213
TOTAL(U.S.)	1554265	1579317	1610804	1629908	1650755	1676751	1712007	1730675	1768416	1802531	1838566
Canada											
MAPP-CAN	10507	10508	10502	11190	11407	11654	12113	13060	13514	13813	13572
NPCC-CAN	33212	39388	41424	35153	38609	42934	42916	44091	47413	42108	41182
New Brunswick	1206	1234	1233	1808	3815	3229	3412	3427	3495	3498	3514
Nova Scotia	5654	6535	6800	7127	7189	7425	7635	7740	8072	8403	8647
Ontario	26352	31619	33391	26218	27605	32280	31869	32924	35846	30207	29021
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	35131	37982	39899	40673	41118	41602	41894	42142	42210	42196	41918
TOTAL(Canada)	78850	87878	91825	87016	91134	96190	96923	99293	103137	98117	96672
Mexico											
WSCC-MEX	0	0	0	0	0	600	1200	1500	2000	2400	3000
NERC-Total	1633115	1667195	1702629	1716924	1741889	1773541	1810130	1831468	1873553	1903048	1938238
ASCC	352	351	356	361	366	371	376	381	386	391	396

Electricity Production by Nuclear - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	42905	49905	42832	46526	44326	44913	44217	45054	45405	43727	47577
ERCOT	15788	20880	22566	27844	28615	30242	30679	29206	30730	30684	29326
MAAC	72213	73861	75435	77020	78671	77060	78578	77468	76127	77851	77989
MAIN	88582	90178	88878	89572	91556	91159	90004	91855	91439	89787	92742
Cmnwlth Edison	65787	63175	64105	65760	64825	66310	65960	65090	66705	65915	65920
East Missouri	7998	9645	8118	7708	9640	8235	8043	9502	8041	8065	9643
S Cent Illinois	3572	6169	5353	4841	5994	5331	4644	6073	5342	4645	6050
Wis-Upper Mich	11225	11189	11302	11263	11097	11283	11357	11190	11351	11162	11129
MAPP-US	25189	25431	26974	25664	26384	27946	25951	26303	26804	26049	26618
NPCC-US	61158	70260	68566	70154	67432	70545	67938	70705	67880	70757	68084
New York	23670	31563	29331	30820	27888	30791	27865	30742	27917	30794	28011
NEPOOL	37488	38697	39235	39334	39544	39754	40073	39963	39963	39963	40073
SERC	164361	172143	190216	190405	198162	202906	204467	212231	216221	212708	220881
Florida	21687	20572	27851	27024	27151	28251	26910	27284	29017	26027	28166
Southern	37712	39014	39040	39255	39831	39510	39421	39628	39408	39626	39796
TVA	13895	19127	26276	31147	34171	38885	44671	48721	50691	53466	56129
VACAR	91067	93430	97049	92979	97009	96260	93465	96598	97105	93589	96790
SPP	40767	42799	40394	42291	43459	41509	42386	43023	43020	42137	42370
Southeast	32919	35435	31539	34655	35825	32461	34708	35381	33970	34503	34715
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	7848	7364	8855	7636	7634	9048	7678	7642	9050	7634	7655
WSCC-US	62174	64360	64939	66224	63404	67480	64777	64691	65855	66744	64457
NW Power Pool	11854	12537	12738	12693	12693	12693	12772	12693	12693	12693	12772
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	14991	16323	16492	16376	16878	17127	17401	17094	17142	17455	17329
Calif-So. Nev	35329	35500	35709	37155	33833	37660	34604	34904	36020	36596	34356
TOTAL(U.S.)	573137	609817	620800	635700	642009	653760	648997	660536	663481	660444	670044
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	69207	83812	88768	100974	102002	100176	103617	103518	100302	107610	110395
New Brunswick	5338	4479	4493	4479	4479	4479	4493	4479	4479	4479	4493
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	59469	75633	79275	91695	92323	90997	94424	94339	91123	98431	101202
Quebec	4400	3700	5000	4800	4700	4700	4700	4700	4700	4700	4700
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	69207	83812	88768	100974	102002	100176	103617	103518	100302	107610	110395
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	642344	693629	709568	736674	744011	753936	752614	764054	763783	768054	780439
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 31

Electricity Production by Hydro - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	2912	2832	2843	2849	2846	2846	2842	2842	2841	2841	2841
ERCOT	658	664	664	664	664	664	664	664	664	664	664
MAAC	4880	3616	3616	3616	3616	3616	3616	3616	3616	3616	3616
MAIN	2722	2090	2151	2169	2169	2169	2169	2169	2178	2178	2080
Cmnwlth Edison	14	0	0	0	0	0	0	0	0	0	0
East Missouri	1593	786	786	786	786	786	786	786	786	786	786
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	1115	1304	1365	1383	1383	1383	1383	1383	1392	1392	1294
MAPP-US	9823	9863	11057	11962	12357	12747	12983	13141	13140	13140	12927
NPCC-US	32629	28232	28339	28457	28544	28603	28599	28709	28700	28674	28629
New York	26588	23318	23429	23563	23680	23770	23797	23923	23923	23923	23923
NEPOOL	6041	4914	4910	4894	4864	4833	4802	4786	4777	4751	4706
SERC	34117	31464	31485	31416	31122	31201	31409	31430	31430	31409	31502
Florida	15	244	244	244	244	244	244	244	244	244	244
Southern	6900	6599	6599	6599	6599	6599	6599	6599	6599	6599	6599
TVA	20897	18704	18704	18612	18339	18418	18626	18626	18626	18626	18709
VACAR	6305	5917	5938	5961	5940	5940	5940	5961	5961	5940	5950
SPP	8939	5850	5850	5850	5913	6100	6100	6100	6100	6100	6100
Southeast	745	293	293	293	356	420	420	420	420	420	420
West Central	8134	5494	5494	5494	5494	5617	5617	5617	5617	5617	5617
Northern	60	63	63	63	63	63	63	63	63	63	63
WSCC-US	177182	159666	161186	161117	161752	162087	163586	163683	163809	163932	164226
NW Power Pool	143661	112606	113109	112997	113462	113637	114281	114145	114355	114364	114790
Rocky Mtn	6188	7388	7832	7918	7918	7918	7918	7918	7918	7978	7984
Ariz-N. Mex	2990	3139	3510	3589	3681	3631	4452	4471	4371	4228	4065
Calif-So. Nev	24343	36533	36735	36613	36691	36901	36935	37149	37165	37362	37387
TOTAL(U.S.)	273862	244277	247191	248100	248983	250033	251968	252354	252478	252554	252585
Canada											
MAPP-CAN	25438	30047	30588	26315	27091	27591	27851	27986	28520	29705	31256
NPCC-CAN	151031	167761	171543	177322	178916	182554	191106	196080	199560	207699	210826
New Brunswick	3218	2632	2632	2632	2632	2632	2632	2632	2632	2632	2632
Nova Scotia	1139	996	1003	1004	1000	997	997	997	997	997	997
Ontario	36631	35516	35647	35979	36004	36134	36029	35943	37005	38076	38052
Quebec	110043	128617	132261	137707	139280	142791	151448	156508	158926	165994	169145
WSCC-CAN	52689	49810	49896	49895	50190	51616	51792	52626	53188	52162	52688
TOTAL(Canada)	229158	247618	252027	253532	256197	261761	270749	276692	281268	289566	294770
Mexico											
WSCC-MEX	0	0	0	0	65	100	130	130	130	130	130
NERC-Total	503020	491895	499218	501632	505245	511894	522847	529176	533876	542250	547485
ASCC	266	336	579	579	579	579	579	579	580	580	579

Electricity Production by Geothermal - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US	9852	12325	11561	11277	10688	10468	9926	9642	9208	8951	8737
NW Power Pool	155	257	244	254	237	237	255	237	237	254	246
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	9697	12068	11317	11023	10451	10231	9671	9405	8971	8697	8491
TOTAL(U.S.)	9852	12325	11561	11277	10688	10468	9926	9642	9208	8951	8737
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	4476	4289	4327	4376	4490	4500	5000	5000	5000	5000	5000
NERC-Total	14328	16614	15888	15653	15178	14968	14926	14642	14208	13951	13737
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 33

Electricity Production by Oil[a] - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	654	1193	1189	1365	1124	1250	1289	1466	1636	1988	1729
ERCOT	293	442	452	436	449	438	434	448	445	434	482
MAAC	9625	11434	10993	11294	11571	12575	11721	14450	16671	16803	17257
MAIN	379	548	608	753	1093	1079	1560	1664	1945	2645	2831
Cmnwlth Edison	257	425	485	570	895	860	1200	1410	1635	2250	2475
East Missouri	46	56	47	45	43	60	60	53	63	66	52
S Cent Illinois	45	52	59	119	146	152	292	189	237	319	292
Wis-Upper Mich	31	15	17	19	9	7	8	12	10	10	12
MAPP-US	78	119	132	149	160	179	218	276	309	308	352
NPCC-US	64305	54041	41619	33736	34539	31440	33336	33865	37219	38430	41302
New York	32987	31998	24650	16411	16083	11382	12462	12003	13213	12130	12989
NEPOOL	31318	22043	16969	17325	18456	20058	20874	21862	24006	26300	28313
SERC	25824	26486	24034	24383	25924	28863	19811	19803	18619	22274	22021
Florida	24567	23760	22512	23513	25008	27813	17917	17778	15438	17429	15543
Southern	98	22	50	42	19	12	62	36	175	401	686
TVA	123	201	240	113	212	311	447	531	771	1008	1344
VACAR	1036	2503	1232	715	685	727	1385	1458	2235	3436	4448
SPP	925	112	117	162	142	137	155	231	320	425	512
Southeast	839	50	50	53	60	64	59	111	73	89	127
West Central	60	13	13	13	13	13	26	50	51	51	51
Northern	26	49	54	96	69	60	70	70	196	285	334
WSCC-US	4648	797	864	968	975	1057	1165	1198	1270	1453	1237
NW Power Pool	163	36	36	36	36	36	36	36	36	36	36
Rocky Mtn	0	12	12	17	17	17	17	17	17	17	17
Ariz-N. Mex	79	113	236	325	337	425	498	533	557	680	552
Calif-So. Nev	4406	636	580	590	585	579	614	612	660	720	632
TOTAL(U.S.)	106731	95172	80008	73246	75977	77018	69689	73401	78434	84760	87723
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	11323	10245	10401	9419	9029	8623	9339	9831	10497	10305	10671
New Brunswick	5932	6565	6552	6557	6051	5441	6084	6496	6768	7184	7574
Nova Scotia	2285	2313	2338	2282	2351	2374	2431	2612	2568	2528	2600
Ontario	1106	1167	1211	280	327	508	524	423	861	293	197
Quebec	2000	200	300	300	300	300	300	300	300	300	300
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	11323	10245	10401	9419	9029	8623	9339	9831	10497	10305	10671
Mexico											
WSCC-MEX	1218	2214	2615	3000	3300	3208	2025	1076	1273	1633	1861
NERC-Total	119272	107631	93024	85665	88306	88849	81053	84308	90204	96698	100255
ASCC	90	99	93	96	99	102	106	112	118	125	132

---

[a] Electricity production by steam, combustion turbine (including diesel), and combined cycle capacity.

Table 34

Electricity Production by Oil - Steam - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	605	832	827	988	804	884	891	1027	1076	1188	916
ERCOT	267	401	404	388	389	386	387	392	387	385	384
MAAC	8888	10756	10585	10813	11169	12115	11301	13782	15653	15572	15641
MAIN	351	520	575	715	1060	1028	1493	1606	1885	2579	2785
Cmnwlth Edison	247	420	480	560	880	840	1175	1385	1615	2230	2460
East Missouri	41	49	38	38	36	37	38	37	39	39	37
S Cent Illinois	43	51	57	117	144	151	280	184	231	310	288
Wis-Upper Mich	20	0	0	0	0	0	0	0	0	0	0
MAPP-US	42	58	54	65	62	67	77	99	91	68	71
NPCC-US	63291	53340	40996	33112	33913	30810	32702	33227	36574	37775	40636
New York	32630	31823	24550	16311	15983	11282	12362	11903	13113	12030	12889
NEPOOL	30661	21517	16446	16801	17930	19528	20340	21324	23461	25745	27747
SERC	24896	25750	23106	23062	23917	26404	18410	18354	16332	19145	18399
Florida	24016	23383	22027	22533	23456	25774	17188	17174	14927	16801	14924
Southern	57	9	21	18	11	9	58	32	66	161	310
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	823	2358	1058	511	450	621	1164	1148	1339	2183	3165
SPP	895	20	22	21	22	35	60	124	114	102	143
Southeast	822	0	0	0	0	0	0	40	21	28	68
West Central	60	13	13	13	13	13	26	50	51	51	51
Northern	13	7	9	8	9	22	34	34	42	23	24
WSCC-US	4572	533	617	684	660	749	850	824	943	1068	898
NW Power Pool	158	18	18	18	18	18	18	18	18	18	18
Rocky Mtn	0	12	12	15	15	15	15	15	15	15	15
Ariz-N. Mex	76	113	228	308	289	383	454	430	495	594	513
Calif-So. Nev	4338	390	359	343	338	333	363	361	415	441	352
TOTAL(U.S.)	103807	92210	77186	69848	71996	72478	66171	69435	73055	77882	79873
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	11028	9888	9881	8881	8406	7982	8528	8775	9354	9079	9290
New Brunswick	5931	6507	6424	6396	5799	5176	5693	5984	6151	6464	6737
Nova Scotia	2266	2227	2259	2218	2293	2311	2329	2384	2372	2335	2369
Ontario	1087	1154	1198	267	314	495	506	407	831	280	184
Quebec	1744	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	11028	9888	9881	8881	8406	7982	8528	8775	9354	9079	9290
Mexico											
WSCC-MEX	1183	2134	2535	3000	3300	3208	2025	1076	1273	1633	1861
NERC-Total	116018	104232	89602	81729	83702	83668	76724	79286	83682	88594	91024
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 35

Electricity Production by Oil - Combustion Turbine[a] - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	49	361	362	377	320	366	398	439	560	800	813
ERCOT	26	41	48	48	60	52	47	56	58	49	98
MAAC	525	486	267	321	282	283	240	287	538	614	917
MAIN	28	28	33	38	33	51	67	58	60	66	46
Cmnwlth Edison	10	5	5	10	15	20	25	25	20	20	15
East Missouri	5	7	9	7	7	23	22	16	24	27	15
S Cent Illinois	2	1	2	2	2	1	12	5	6	9	4
Wis-Upper Mich	11	15	17	19	9	7	8	12	10	10	12
MAPP-US	32	60	77	81	97	111	135	171	212	234	272
NPCC-US	668	427	351	351	352	354	356	358	361	366	371
New York	357	175	100	100	100	100	100	100	100	100	100
NEPOOL	311	252	251	251	252	254	256	258	261	266	271
SERC	895	511	708	633	786	745	920	960	1832	2572	3034
Florida	547	152	265	292	331	325	248	115	56	71	31
Southern	41	13	29	24	8	3	4	4	109	240	376
TVA	123	201	240	113	212	311	447	531	771	1008	1344
VACAR	184	145	174	204	235	106	221	310	896	1253	1283
SPP	30	92	95	141	120	102	95	107	145	248	281
Southeast	17	50	50	53	60	64	59	71	52	61	59
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	13	42	45	88	60	38	36	36	93	187	222
WSCC-US	75	258	241	277	305	296	300	354	308	363	329
NW Power Pool	5	18	18	18	18	18	18	18	18	18	18
Rocky Mtn	0	0	0	2	2	2	2	2	2	2	2
Ariz-N. Mex	2	0	8	17	45	37	36	90	50	72	37
Calif-So. Nev	68	240	215	240	240	239	244	244	238	271	272
TOTAL(U.S.)	2328	2264	2182	2267	2355	2360	2558	2790	4074	5312	6161
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	295	357	520	538	623	641	811	1056	1143	1226	1381
New Brunswick	1	58	128	161	252	265	391	512	617	720	837
Nova Scotia	19	86	79	64	58	63	102	228	196	193	231
Ontario	19	13	13	13	13	13	18	16	30	13	13
Quebec	256	200	300	300	300	300	300	300	300	300	300
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	295	357	520	538	623	641	811	1056	1143	1226	1381
Mexico											
WSCC-MEX	35	80	80	0	0	0	0	0	0	0	0
NERC-Total	2658	2701	2782	2805	2978	3001	3369	3846	5217	6538	7542
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Includes diesel capacity.

Electricity Production by Oil - Combined Cycle - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	212	192	141	160	120	177	180	381	480	617	699
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	4	1	1	3	1	1	6	6	6	6	9
NPCC-US	346	274	272	273	274	276	278	280	284	289	295
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	346	274	272	273	274	276	278	280	284	289	295
SERC	33	225	220	688	1221	1714	481	489	455	557	588
Florida	4	225	220	688	1221	1714	481	489	455	557	588
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	29	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	61	75	88
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	61	75	88
WSCC-US	1	6	6	7	10	12	15	20	19	22	10
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	1	0	0	0	3	5	8	13	12	14	2
Calif-So. Nev	0	6	6	7	7	7	7	7	7	8	8
TOTAL(U.S.)	596	698	640	1131	1626	2180	960	1176	1305	1566	1689
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	596	698	640	1131	1626	2180	960	1176	1305	1566	1689
ASCC	90	99	93	96	99	102	106	112	118	125	132

Table 37

Electricity Production by Gas[a] - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	677	750	935	1398	1627	1925	2647	3268	3543	4935	3879
ERCOT	82170	77466	79153	77165	81781	82311	84854	90818	92729	93341	89556
MAAC	5554	5458	5753	6806	7225	9544	11593	13979	12759	14584	15933
MAIN	735	261	331	382	541	723	1602	1933	1849	2487	2932
Cmnwlth Edison	470	15	15	20	35	40	65	120	210	320	430
East Missouri	63	34	60	70	34	46	56	39	47	48	32
S Cent Illinois	56	88	99	79	100	120	472	410	544	1034	1224
Wis-Upper Mich	146	124	157	213	372	517	1009	1364	1048	1085	1246
MAPP-US	587	619	770	752	758	855	1001	1080	1159	1236	1396
NPCC-US	27656	26420	25411	25855	25150	24269	24233	24183	24365	24441	24533
New York	21570	21198	20216	20644	19918	19003	18930	18829	18950	18943	18920
NEPOOL	6086	5222	5195	5211	5232	5266	5303	5354	5415	5498	5613
SERC	20452	20315	21600	26637	26733	27375	39086	36820	35363	37443	35779
Florida	17310	18079	18188	22948	22665	22803	34670	32843	30712	31852	30614
Southern	2340	1162	1436	1422	1754	1840	2004	2125	2620	3060	2539
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	802	1074	1976	2267	2314	2732	2412	1852	2031	2531	2626
SPP	67806	60595	61795	63041	65834	67022	68858	71054	74040	78163	81117
Southeast	42829	37252	39054	37470	37714	38655	38996	39573	42666	43728	43812
West Central	23107	21891	21636	23721	25722	26215	27116	28388	28528	30925	33332
Northern	1870	1452	1105	1850	2398	2152	2746	3093	2846	3510	3973
WSCC-US	54317	50406	50970	58272	61447	64075	67994	70498	76863	78009	85534
NW Power Pool	2392	7432	7875	8007	8059	8059	8336	8348	9040	9750	9856
Rocky Mtn	182	220	206	208	291	232	236	618	727	730	743
Ariz-N. Mex	4854	4788	5443	5850	6110	6730	6626	7962	7959	8441	9452
Calif-So. Nev	46889	37966	37446	44207	46987	49054	52796	53570	59137	59088	65483
TOTAL(U.S.)	259954	242290	246718	260308	271096	278099	301868	313633	322670	334639	340659
Canada											
MAPP-CAN	604	604	604	437	612	727	681	290	454	507	628
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	3655	3892	4444	4855	5365	6594	8735	9752	10688	11286	11425
TOTAL(Canada)	4259	4496	5048	5292	5977	7321	9416	10042	11142	11793	12053
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	264213	246786	251766	265600	277073	285420	311284	323675	333812	346432	352712
ASCC	2831	2797	2606	2648	2705	2730	2776	2823	2875	2924	2983

---

[a] Electricity production by steam, combustion turbine (including diesel), and combined cycle capacity.

Electricity Production by Gas - Steam - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	376	401	500	975	1090	1026	1373	1875	1978	1657	591
ERCOT	79726	74690	76304	74369	78264	80011	82672	85136	83336	82759	77530
MAAC	4218	4017	4404	4916	5128	7002	7418	8280	6671	7005	6491
MAIN	698	165	220	223	190	218	379	313	343	484	484
Cmnwlth Edison	461	0	0	0	0	0	0	0	0	0	0
East Missouri	62	33	59	69	33	45	55	38	46	47	31
S Cent Illinois	53	76	86	62	68	75	283	220	257	386	405
Wis-Upper Mich	122	56	75	92	89	98	41	55	40	51	48
MAPP-US	484	350	486	438	517	565	632	667	674	700	728
NPCC-US	26493	25027	24250	24602	23993	23359	23353	23297	23469	23534	23610
New York	21161	20494	19738	20075	19448	18785	18747	18646	18767	18760	18737
NEPOOL	5332	4533	4512	4527	4545	4574	4606	4651	4702	4774	4873
SERC	16473	14968	15491	15137	14769	14895	18133	16135	14369	15262	14117
Florida	14542	14440	14311	14108	13772	13804	17168	15593	13746	14736	13732
Southern	1830	517	761	780	552	505	576	542	623	526	385
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	101	11	419	249	445	586	389	0	0	0	0
SPP	62935	55661	56964	57930	60779	61762	63030	64668	68106	71048	68573
Southeast	41297	35832	37642	36035	36245	37129	37397	37878	40986	41965	41986
West Central	19907	18451	18298	20173	22332	22820	23425	24491	25043	26713	23919
Northern	1731	1378	1024	1722	2202	1813	2208	2299	2077	2370	2668
WSCC-US	48881	41130	41221	47815	49939	49715	51138	52679	56348	56891	61623
NW Power Pool	1498	3703	4133	4030	4082	3933	4076	4108	4073	4073	4155
Rocky Mtn	177	196	182	192	188	185	185	185	185	185	185
Ariz-N. Mex	2616	2528	3050	3306	3515	3840	3691	4150	3886	4073	4015
Calif-So. Nev	44590	34703	33856	40287	42154	41757	43186	44236	48204	48560	53268
TOTAL(U.S.)	240284	216409	219840	226405	234669	238553	248128	253050	255294	259340	253747
Canada											
MAPP-CAN	387	387	387	304	456	518	484	199	265	340	407
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	3051	3504	4047	4420	4878	6076	8174	9129	9989	10540	10679
TOTAL(Canada)	3438	3891	4434	4724	5334	6594	8658	9328	10254	10880	11086
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	243722	220300	224274	231129	240003	245147	256786	262378	265548	270220	264833
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 39

Electricity Production by Gas - Combustion Turbine[a] - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	99	147	233	221	260	577	774	1020	1159	2815	2817
ERCOT	404	549	590	556	970	754	716	876	755	723	994
MAAC	1004	865	757	1396	1672	1936	3065	4255	4164	4913	6584
MAIN	37	96	111	159	341	485	1213	1615	1501	1993	2438
Cmnwltn Edison	9	15	15	20	35	40	65	120	210	320	430
East Missouri	1	1	1	1	1	1	1	1	1	1	1
S Cent Illinois	3	12	13	17	22	25	179	185	282	638	809
Wis-Upper Mich	24	68	82	121	283	419	968	1309	1008	1034	1198
MAPP-US	77	241	256	286	211	260	339	383	453	504	636
NPCC-US	440	734	507	598	500	248	213	213	214	214	215
New York	409	704	478	569	470	218	183	183	183	183	183
NEPOOL	31	30	29	29	30	30	30	30	31	31	32
SERC	1087	1041	1272	1658	1730	1659	2159	2055	2089	2510	1977
Florida	463	345	543	934	937	931	1331	1161	907	1030	895
Southern	510	645	675	642	728	636	662	762	864	1031	623
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	114	51	54	82	65	92	166	132	318	449	459
SPP	218	239	263	300	354	386	525	614	558	917	898
Southeast	9	9	9	9	9	9	9	10	10	110	150
West Central	76	156	173	164	152	151	166	166	189	210	223
Northern	133	74	81	127	193	226	350	438	359	597	525
WSCC-US	394	2440	2541	2180	2095	2199	2317	2807	3281	3520	4009
NW Power Pool	68	1315	1320	1358	1358	1507	1625	1621	1621	1621	1625
Rocky Mtn	5	24	24	16	103	47	51	433	542	545	558
Ariz-N. Mex	104	92	153	257	511	542	528	636	997	1231	1700
Calif-So. Nev	217	1009	1044	549	123	103	113	117	121	123	126
TOTAL(U.S.)	3760	6352	6530	7354	8133	8504	11321	13838	14174	18109	20568
Canada											
MAPP-CAN	217	217	217	133	156	209	197	91	189	167	221
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	604	388	397	435	487	518	561	623	699	746	746
TOTAL(Canada)	821	605	614	568	643	727	758	714	888	913	967
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	4581	6957	7144	7922	8776	9231	12079	14552	15062	19022	21535
ASCC	1060	563	565	494	585	638	677	596	735	805	804

[a] Includes diesel capacity.

Table 40

Electricity Production by Gas - Combined Cycle - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	202	202	202	202	277	322	500	373	406	463	471
ERCOT	2040	2227	2259	2240	2547	1546	1466	4806	8638	9859	11032
MAAC	332	576	592	494	425	606	1110	1444	1924	2666	2858
MAIN	0	0	0	0	10	20	10	5	5	10	10
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	10	20	10	5	5	10	10
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	26	28	28	28	30	30	30	30	32	32	32
NPCC-US	723	659	654	655	657	662	667	673	682	693	708
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	723	659	654	655	657	662	667	673	682	693	708
SERC	2892	4306	4837	9842	10234	10821	18794	18630	18905	19671	19685
Florida	2305	3294	3334	7906	7956	8068	16171	16089	16059	16086	15987
Southern	0	0	0	0	474	699	766	821	1133	1503	1531
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	587	1012	1503	1936	1804	2054	1857	1720	1713	2082	2167
SPP	4653	4695	4568	4811	4701	4874	5303	5772	5376	6198	11646
Southeast	1523	1411	1403	1426	1460	1517	1590	1685	1670	1653	1676
West Central	3124	3284	3165	3384	3238	3244	3525	3731	3296	4002	9190
Northern	6	0	0	1	3	113	188	356	410	543	780
WSCC-US	5042	6836	7208	8277	9413	12161	14539	15012	17234	17598	19902
NW Power Pool	826	2414	2422	2619	2619	2619	2635	2619	3346	4056	4076
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	2134	2168	2240	2287	2084	2348	2407	3176	3076	3137	3737
Calif-So. Nev	2082	2254	2546	3371	4710	7194	9497	9217	10812	10405	12089
TOTAL(U.S.)	15910	19529	20348	26549	28294	31042	42419	46745	53202	57190	66344
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	15910	19529	20348	26549	28294	31042	42419	46745	53202	57190	66344
ASCC	1771	2234	2041	2154	2120	2092	2099	2227	2140	2119	2179

Table 41

Electricity Production by Other (Utility) Fuels - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	-28	0	0	0	0	0	0	0	0	0	0
ERCOT	669	159	159	241	681	2608	2654	2638	3905	6617	7702
MAAC	1225	1185	1222	1153	1161	1167	1197	1179	1177	1202	1152
MAIN	0	568	572	569	567	567	561	568	567	562	558
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	568	572	569	567	567	561	568	567	562	558
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	366	342	372	334	378	394	413	409	424	422	437
NPCC-US	67	67	67	67	67	67	67	67	67	67	67
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	67	67	67	67	67	67	67	67	67	67	67
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	279	313	314	313	313	373	374	373	373	373	374
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	279	313	314	313	313	373	374	373	373	373	374
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US	483	1317	1501	1077	907	983	1557	1987	3411	4195	4758
NW Power Pool	446	660	707	700	700	700	703	744	771	771	773
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	4	4	4	4	22	22	22
Calif-So. Nev	37	657	794	377	203	279	850	1239	2618	3402	3963
TOTAL(U.S.)	3061	3951	4207	3754	4074	6159	6823	7221	9924	13438	15048
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	41	0	0	0	776	2125	2132	2125	2125	2125	2132
New Brunswick	41	0	0	0	776	2125	2132	2125	2125	2125	2132
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	31	483	1050	1989
TOTAL(Canada)	41	0	0	0	776	2125	2132	2156	2608	3175	4121
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Totals	3102	3951	4207	3754	4850	8284	8955	9377	12532	16613	19169
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 42

Electricity Production by Non-Utility Generators - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	7916	7928	13158	14837	16372	17241	19112	19576	19902	20142	20193
ERCOT	20936	22692	23814	23543	20503	16106	16266	16206	15606	15241	14949
MAAC	7974	12388	15091	21463	26977	28476	29189	29494	29857	30095	30307
MAIN	135	48	84	88	101	108	113	180	262	270	327
Cmnwlth Edison	106	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	13	10	10	10	10	10	10	10	10	10	10
Wis-Upper Mich	16	38	74	78	91	98	103	170	252	260	317
MAPP-US	3	23	23	24	24	25	25	26	26	27	27
NPCC-US	10675	16119	28187	36914	41660	45482	45071	44693	44523	45043	45853
New York	4834	5700	15559	23620	27939	31766	31355	31033	31030	31591	32475
NEPOOL	5841	10419	12628	13294	13721	13716	13716	13660	13493	13452	13378
SERC	10627	11273	13843	16291	21148	22994	26465	25866	27847	29334	31749
Florida	2119	1448	1729	2092	6201	6489	9544	9598	10904	11168	11278
Southern	211	220	220	220	220	220	220	220	220	220	220
TVA	983	745	219	0	0	0	0	0	0	0	0
VACAR	7314	8860	11675	13979	14727	16285	16701	16048	16723	17946	20251
SPP	3330	5154	5159	5154	5154	5154	5159	5154	5154	5154	5159
Southeast	2007	1987	1991	1987	1987	1987	1991	1987	1987	1987	1991
West Central	1323	3167	3168	3167	3167	3167	3168	3167	3167	3167	3168
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US	47061	54914	59178	64767	68001	69548	70983	72281	72767	73051	73597
NW Power Pool	3208	5490	6909	8856	9233	9653	10268	10389	10565	10714	10769
Rocky Mtn	876	1646	1694	2032	2514	2717	3347	3473	3473	3473	3473
Ariz-N. Mex	2084	2172	2032	2090	2365	2217	2151	2477	2323	2362	2623
Calif-So. Nev	40893	45606	48543	51789	53889	54961	55217	55942	56406	56502	56732
TOTAL(U.S.)	108657	130539	158537	183081	199940	205134	212383	213476	215944	218357	222161
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	630	2661	4680	6884	8259	9055	10000	10937	11907	12887	13874
New Brunswick	60	55	55	55	55	55	55	55	55	55	55
Nova Scotia	0	0	140	210	350	350	350	350	350	350	350
Ontario	570	2106	3085	4319	5154	5950	6895	7832	8802	9782	10769
Quebec	0	500	1400	2300	2700	2700	2700	2700	2700	2700	2700
WSCC-CAN	1115	0	47	793	1940	2158	2178	2187	2136	2155	2185
TOTAL(Canada)	1745	2661	4727	7677	10199	11213	12178	13124	14043	15042	16059
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	110402	133200	163264	190758	210139	216347	224561	226600	229987	233399	238220
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 43

Electricity Requirements for Pumped Storage Input (Load) - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	5094	4344	4471	4835	5586	5952	6307	6562	6364	7131	7433
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	3091	3325	3471	3599	2959	3001	2978	2975	2994	2985	2984
MAIN	53	21	56	75	48	83	83	70	87	79	109
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	53	21	56	75	48	83	83	70	87	79	109
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	4562	4219	4652	4229	4169	4918	5472	6245	5410	5829	5059
New York	2183	1865	2295	1860	1785	2515	3045	3790	2915	3280	2460
NEPOOL	2379	2354	2357	2369	2384	2403	2427	2455	2495	2549	2599
SERC	7220	6168	7492	7134	8315	9984	8939	10098	10471	11437	10540
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	278	511	555	521	544	851	479	563	666	766	815
TVA	2247	1882	1938	1992	2403	2499	2432	2616	2703	2804	2779
VACAR	4695	3775	4999	4621	5368	6634	6028	6919	7102	7867	6946
SPP	93	145	145	145	145	145	145	145	145	145	145
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	93	145	145	145	145	145	145	145	145	145	145
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US[a]	992	2229	1821	1983	1702	1736	1927	1792	1798	1818	1857
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	240	350	350	334	469	492	491	505	510	474	460
Ariz-N. Mex	196	280	150	172	139	148	174	192	227	259	338
Calif-So. Nev[a]	556	1599	1321	1477	1094	1096	1262	1095	1061	1085	1059
TOTAL(U.S.)	21105	20451	22108	22000	22924	25819	25851	27887	27269	29424	28127
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	21105	20451	22108	22000	22924	25819	25851	27887	27269	29424	28127
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Pumped storage output (generation) is greater than pumped storage input (load) because some capacity reported as "pumped storage" includes conventional hydro.

Table 44

Electricity Output by Pumped Storage (Generation) - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	3847	3279	3370	3787	4192	4459	4720	4907	4770	5398	5585
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	2133	2327	2435	2525	2063	2092	2076	2074	2086	2080	2080
MAIN	17	10	30	39	25	44	44	35	46	44	58
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	17	10	30	39	25	44	44	35	46	44	58
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	3172	3038	3340	3044	3005	3529	3917	4458	3877	4176	3638
New York	1422	1305	1605	1300	1250	1760	2130	2650	2040	2300	1725
NEPOOL	1750	1733	1735	1744	1755	1769	1787	1808	1837	1876	1913
SERC	5673	4853	5856	5578	6491	7796	6993	7882	8178	8921	8243
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	202	404	439	408	422	672	387	451	539	621	664
TVA	1769	1457	1501	1542	1861	1935	1884	2026	2094	2171	2152
VACAR	3702	2992	3916	3628	4208	5189	4722	5405	5545	6129	5427
SPP	49	75	75	75	75	75	75	75	75	75	75
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	49	75	75	75	75	75	75	75	75	75	75
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US[a]	2962	2819	2910	3059	3077	3201	3354	3290	3301	3379	3411
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	93	316	316	292	373	400	400	400	400	400	400
Ariz-N. Mex	137	195	95	154	131	137	155	168	192	215	270
Calif-So. Nev[a]	2732	2308	2499	2613	2573	2664	2799	2722	2709	2764	2741
TOTAL(U.S.)	17853	16401	18016	18107	18928	21196	21179	22721	22333	24073	23090
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	17853	16401	18016	18107	18928	21196	21179	22721	22333	24073	23090
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Pumped storage output (generation) is greater than pumped storage input (load) because some capacity reported as "pumped storage" includes conventional hydro.

Table 45

Net Electricity Imports[a] - Millions kWh

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	-39728	-28750	-23972	-23746	-26782	-25594	-26898	-23969	-23608	-22930	-18050
ERCOT	85	-245	-645	1435	1162	1247	1313	1467	1564	872	1657
MAAC	19628	22992	17452	13273	11316	6986	6946	7183	7270	7315	7397
MAIN	2961	-581	1304	2462	1763	4136	1812	1907	3319	6073	6616
Cmnwlth Edison	-4513	-4105	-4330	-3925	-2740	-2790	-2230	-1245	-1185	-615	-125
East Missouri	761	-866	293	926	206	1171	1051	652	1593	2108	1657
S Cent Illinois	593	-851	151	83	-785	-54	-1211	-1332	-1146	-862	-471
Wis-Upper Mich	6120	5241	5190	5378	5082	5809	4202	3832	4057	5442	5555
MAPP-US	-6825	-5064	-4356	-3699	-2510	-1098	393	1115	2794	4287	5074
NPCC-US	8031	11864	18661	18193	17724	18333	21274	21656	22201	21851	22801
New York	1352	667	5028	5300	6156	7939	11574	11704	12549	12199	13149
NEPOOL	6679	11197	13633	12893	11568	10394	9700	9952	9652	9652	9652
SERC	19367	15629	11848	10997	11932	14185	15536	19119	18895	19196	14989
Florida	22590	23583	22347	19491	17375	16392	15270	18925	18209	18365	17560
Southern	-17729	-17978	-19356	-16434	-13075	-9929	-7948	-7809	-8613	-9173	-8486
TVA	2692	144	799	-208	-149	-308	-607	-633	-567	-593	-550
VACAR	11814	9880	8058	8148	7781	8030	8821	8636	9866	10597	6465
SPP	-12104	-7946	-6526	-6509	-5737	-3142	-2684	-3144	-1534	-1394	-3509
Southeast	-5021	-3232	-3642	-3147	-2318	-1082	-468	-1576	-602	-343	-191
West Central	-5753	-4324	-3292	-4344	-4141	-4070	-4005	-3884	-3528	-3036	-3548
Northern	-1330	-390	408	982	722	2010	1789	2316	2596	1985	230
WSCC-US	8814	29195	32303	24585	26947	23876	28026	32227	28053	30438	29039
NW Power Pool	-22330	-3961	-3736	-5779	-5901	-5821	-6208	-4276	-5064	-6693	-7125
Rocky Mtn	-3654	-3706	-3678	-3783	-3732	-3708	-3120	-3039	-3004	-3014	-2939
Ariz-N. Mex	-9068	-3941	-3608	-2988	-2461	-2356	-2419	-2158	-1724	-1248	-1273
Calif-So. Nev	43866	40803	43325	37135	39041	35761	39773	41700	37845	41393	40376
TOTAL(U.S.)	229	37094	46069	36991	35815	38929	45718	57561	58954	65708	66014
Canada											
MAPP-CAN	-5949	-9055	-8294	-3494	-3751	-3925	-3613	-3473	-3780	-4514	-5152
NPCC-CAN[b]	36109	18386	17922	15312	13779	13778	10016	9079	9542	5759	6429
New Brunswick	-3157	-1561	-871	-1110	-2897	-2599	-2984	-2921	-2792	-2744	-2706
Nova Scotia	250	171	64	0	0	0	0	0	0	0	0
Ontario	12616	-2524	-3171	-6078	-6124	-6123	-5900	-5000	-4666	-5497	-5365
Quebec[b]	26400	22300	21900	22500	22800	22500	18900	17000	17000	14000	14500
WSCC-CAN	-4248	-310	-312	-310	-310	-310	-310	-310	52	1910	2458
TOTAL(Canada)[b]	25912	9021	9316	11508	9718	9543	6093	5296	5814	3155	3735
Mexico											
WSCC-MEX	-1492	-1927	-1929	-1927	-1927	-1927	-1288	0	0	0	0
NERC-Total	24649	44188	53456	46572	43606	46545	50523	62857	64768	68863	69749
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Electricity Imports less Exports.

[b] Québec net Imports are the result of electricity purchases from Churchill Falls in Labrador (Newfoundland) which is outside the boundaries of NPCC (Canada).

Projections 1991-2000

Annual coal use by utilities in the United States is projected to increase by more than 124 million tons (16%) over the 1991-2000 period while use in Canada is expected to increase by over 6 million tons (12%). Oil use by utilities in the United States is projected to **decrease** by almost 14 million barrels annually (8%) but **increase** in Canada by nearly 6 million barrels (33%). Utility use of natural gas is expected to increase in the United States by 977 billion cubic feet (39%) over the forecast period and in Canada by 90 billion cubic feet (almost triple the 1991 use).

These projections of coal, oil, and natural gas use for electricity production generally reflect **only** the fossil fuel requirements of electric utilities. They **do not** include the requirements of non-utility generators. (Exceptions are noted in the specific tables.)

Definitions

Distillate Oil — No. 1 and 2 fuel oil, kerosene, and jet fuel. Also includes amounts used at coal-fired generating units for startup and flame stabilization.

Residual Oil — No. 4, 5, and 6 fuel oil.

MCF — Thousand cubic feet.

Interruptible Natural Gas — Interruptible by contract.

Table 46

Coal Requirements by Type - 1000s Tons

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
Western Lignite[a]	75613	75643	76970	75962	76860	80418	82653	82924	84116	86283	89574
Western Coal[a,c]	256930	263576	266909	274606	278403	283589	290421	295446	301097	305816	313162
Other Coal[a]	238417	251354	258998	260304	261660	265462	269349	271256	279071	285038	290278
TOTAL(U.S.)[b,c]	757597	775115	790221	798981	810424	825213	841529	850041	867293	883270	899402
Canada											
Western Lignite	11132	10751	10607	11125	11313	11528	12508	13333	13937	13768	13413
Western Coal	27966	30451	31139	30912	31248	31657	31829	32005	32054	32044	31846
Other Coal	10162	11813	13180	11598	12948	14419	14291	14777	15967	14170	13884
TOTAL(Canada)	49260	53015	54926	53635	55509	57604	58628	60115	61958	59982	59143
Mexico											
Western Lignite	0	0	0	0	0	0	0	0	0	0	0
Western Coal	0	0	0	0	0	0	0	0	0	0	0
Other Coal	0	0	0	0	0	368	736	919	1226	1471	1839
TOTAL(Mexico)	0	0	0	0	0	368	736	919	1226	1471	1839
ASCC											
Western Lignite	0	0	0	0	0	0	0	0	0	0	0
Western Coal	282	285	290	290	295	295	300	300	305	305	310
Other Coal	0	0	0	0	0	0	0	0	0	0	0
TOTAL(ASCC)	282	285	290	290	295	295	300	300	305	305	310

---

[a] Does not include ECAR coal requirements.

[b] Total (U.S.) coal requirements are greater than the sum of the parts (Western Lignite, Western Coal, and Other Coal) because ECAR reports only Total Coal.

[c] Includes coal requirements for Springerville 1 (360 MW), a non-utility generator in the Arizona-New Mexico subregion of WSCC.

Table 47

Coal Requirements by Region - 1000s Tons

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	186637	184542	187344	188109	193501	195744	199106	200415	203009	206133	206388
ERCOT	68696	69548	70756	71143	72645	76758	79863	80605	82318	85536	90032
MAAC	39493	39383	42659	42527	41705	43574	44133	44017	45706	45891	46802
MAIN	52229	54022	55863	56658	57979	59812	62580	63847	65836	66973	67087
Cmnwlth Edison	10005	9800	10170	9950	10445	10575	11160	11825	11690	12295	12805
East Missouri	10207	11234	12019	12889	12482	14027	13947	14018	14872	14945	14727
S Cent Illinois	14670	14855	15265	15904	16109	16378	17705	17514	18079	18374	17941
Wis-Upper Mich	17347	18133	18409	17915	18943	18832	19768	20490	21195	21359	21614
MAPP-US	65806	66301	66977	67791	68094	67345	68599	69735	69937	70862	71674
NPCC-US	18387	19071	18483	18315	18555	18019	18335	18085	18653	18473	19053
New York	12076	12426	11818	11580	11705	11073	11134	10799	11325	11064	11561
NEPOOL	6311	6645	6665	6735	6850	6946	7201	7286	7328	7409	7492
SERC	137424	151692	152827	156512	158636	161988	165290	168208	173857	179221	183560
Florida	21784	24470	24359	25173	25557	26202	26893	27873	30250	31974	34059
Southern	45368	50384	51786	51258	51902	52716	53258	54079	55622	56521	57486
TVA	33913	36227	34659	34705	35124	34960	34116	33794	34256	34418	34593
VACAR	36359	40611	42023	45376	46053	48110	51023	52462	53729	56308	57422
SPP	85653	87313	89907	91987	92408	94222	94766	96474	97537	98914	101628
Southeast	23456	24863	26886	27358	27078	28231	27377	28497	28071	28380	29565
West Central	33799	33648	34228	35056	35080	36033	36407	36895	38061	37578	37568
Northern	28398	28802	28793	29573	30250	29958	30982	31082	31405	32956	34495
WSCC-US[a]	103272	103243	105405	105939	106901	107751	108857	108655	110440	111267	113178
NW Power Pool	40944	44247	45360	45298	45314	44736	45533	44927	45204	45075	45419
Rocky Mtn	19513	19275	19855	20124	20312	20540	20350	20534	21052	21588	22005
Ariz-N. Mex[a]	26851	24596	25097	25506	25911	26472	26977	27213	27907	28262	28891
Calif-So. Nev	15964	15125	15093	15011	15364	16003	15997	15981	16277	16342	16863
Total(U.S.)[a]	757597	775115	790221	798981	810424	825213	841529	850041	867293	883270	899402
Canada											
MAPP-CAN	9642	9642	9636	10155	10341	10557	10935	11708	12109	12366	12102
NPCC-CAN	14605	16329	16883	14521	15892	17426	17864	18402	19795	17572	17195
New Brunswick	561	556	559	786	1572	1336	1399	1418	1443	1446	1455
Nova Scotia	2407	2896	3002	3131	3219	3296	3356	3444	3588	3741	3856
Ontario	11637	12877	13322	10604	11101	12794	13109	13540	14764	12385	11884
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	25013	27044	28407	28959	29276	29621	29829	30005	30054	30044	29846
Total(Canada)	49260	53015	54926	53635	55509	57604	58628	60115	61958	59982	59143
Mexico											
WSCC-MEX	0	0	0	0	0	368	736	919	1226	1471	1839
NERC-Total[a]	806857	828130	845147	852616	865933	883185	900893	911075	930477	944723	960384
ASCC	282	285	290	290	295	295	300	300	305	305	310

---

[a] Includes coal requirements for Springerville 1 (360 MW), a non-utility generator in the Arizona-New Mexico subregion of WSCC.

Table 48

Western Lignite Requirements[a] - 1000s Tons

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR[b]	0	0	0	0	0	0	0	0	0	0	0
ERCOT	47484	47283	47630	46540	47037	50515	54084	54319	55517	57888	60876
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	22318	22465	23008	23325	23576	23580	22382	22282	22385	22286	22388
NPCC-US	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	5811	5895	6332	6097	6247	6323	6187	6323	6214	6109	6310
Southeast	1618	1777	1789	1554	1704	1780	1644	1780	1671	1566	1767
West Central	4193	4118	4543	4543	4543	4543	4543	4543	4543	4543	4543
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US	0	0	0	0	0	0	0	0	0	0	0
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)[b]	75613	75643	76970	75962	76860	80418	82653	82924	84116	86283	89574
Canada											
MAPP-CAN	9642	9642	9636	10155	10341	10557	10935	11708	12109	12366	12102
NPCC-CAN	1490	1109	971	970	972	971	1573	1625	1828	1402	1311
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario[c]	1490	1109	971	970	972	971	1573	1625	1828	1402	1311
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	11132	10751	10607	11125	11313	11528	12508	13333	13937	13768	13413
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[b]	86745	86394	87577	87087	88173	91946	95161	96257	98053	100051	102987
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Mined west of the Mississippi River.

[b] ECAR does not identify coal sources. See Table 47 for ECAR total coal requirements.

[c] Mined in western Canada.

Table 49

Western Coal Requirements[a] - 1000s Tons

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR[b]	0	0	0	0	0	0	0	0	0	0	0
ERCOT	21212	22265	23126	24603	25608	26243	25779	26286	26801	27648	29156
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	21893	22853	24349	27350	28141	30375	33951	36327	38562	39302	40030
Cmnwlth Edison	7393	7610	7885	7745	8190	8165	8710	9335	9355	9870	10195
East Missouri	2281	3150	4050	6667	6323	7781	8482	9776	11323	11456	11366
S Cent Illinois	494	0	0	0	0	0	2007	1973	1996	1859	2090
Wis-Upper Mich	11725	12093	12414	12938	13628	14429	14752	15243	15888	16117	16379
MAPP-US	34092	35133	35271	35693	35760	35307	37400	38539	38461	39385	40023
NPCC-US	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	1886	3181	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	1886	3181	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	74575	76901	78758	81021	81993	83913	84434	85639	86833	88214	90775
Southeast	21751	23038	25096	25803	25373	26450	25732	26716	26399	26813	27797
West Central	29606	29530	29685	30513	30537	31490	31864	32352	33518	33035	33025
Northern	23218	24333	23977	24705	26083	25973	26838	26571	26916	28366	29953
WSCC-US[c]	103272	103243	105405	105939	106901	107751	108857	108655	110440	111267	113178
NW Power Pool	40944	44247	45360	45298	45314	44736	45533	44927	45204	45075	45419
Rocky Mtn	19513	19275	19855	20124	20312	20540	20350	20534	21052	21588	22005
Ariz-N. Mex[c]	26851	24596	25097	25506	25911	26472	26977	27213	27907	28262	28891
Calif-So. Nev	15964	15125	15093	15011	15364	16003	15997	15981	16277	16342	16863
TOTAL(U.S.)[b,c]	256930	263576	266909	274606	278403	283589	290421	295446	301097	305816	313162
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	2953	3407	2732	1953	1972	2036	2000	2000	2000	2000	2000
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario[d]	2953	3407	2732	1953	1972	2036	2000	2000	2000	2000	2000
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	25013	27044	28407	28959	29276	29621	29829	30005	30054	30044	29846
TOTAL(Canada)	27966	30451	31139	30912	31248	31657	31829	32005	32054	32044	31846
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[b,c]	284896	294027	298048	305518	309651	315246	322250	327451	333151	337860	345008
ASCC	282	285	290	290	295	295	300	300	305	305	310

[a] Mined west of the Mississippi River.

[b] ECAR does not identify coal sources. See Table 47 for ECAR total coal requirements.

[c] Includes coal requirements for Springerville 1 (360 MW), a non-utility generator in the Arizona-New Mexico subregion of WSCC.

[d] Mined in western Canada.

Table 50

Other Coal Requirements - 1000s Tons

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR[a]	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	39493	39383	42659	42527	41705	43574	44133	44017	45706	45891	46802
MAIN	30336	31169	31514	29308	29838	29437	28629	27520	27274	27671	27057
Cmnwlth Edison	2612	2190	2285	2205	2255	2410	2450	2490	2335	2425	2610
East Missouri	7926	8084	7969	6222	6159	6246	5465	4242	3549	3489	3361
S Cent Illinois	14176	14855	15265	15904	16109	16378	15698	15541	16083	16515	15851
Wis-Upper Mich	5622	6040	5995	4977	5315	4403	5016	5247	5307	5242	5235
MAPP-US	9396	8703	8698	8773	8758	8458	8817	8914	9091	9191	9263
NPCC-US	18387	19071	18483	18315	18555	18019	18335	18085	18653	18473	19053
New York	12076	12426	11818	11580	11705	11073	11134	10799	11325	11064	11561
NEPOOL	6311	6645	6665	6735	6850	6946	7201	7286	7328	7409	7492
SERC	135538	148511	152827	156512	158636	161988	165290	168208	173857	179221	183560
Florida	21784	24470	24359	25173	25557	26202	26893	27873	30250	31974	34059
Southern	43482	47203	51786	51258	51902	52716	53258	54079	55622	56521	57486
TVA	33913	36227	34659	34705	35124	34960	34116	33794	34256	34418	34593
VACAR	36359	40611	42023	45376	46053	48110	51023	52462	53729	56308	57422
SPP	5267	4517	4817	4869	4168	3986	4145	4512	4490	4591	4543
Southeast	87	48	1	1	1	1	1	1	1	1	1
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	5180	4469	4816	4868	4167	3985	4144	4511	4489	4590	4542
WSCC-US	0	0	0	0	0	0	0	0	0	0	0
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)[a]	238417	251354	258998	260304	261660	265462	269349	271256	279071	285038	290278
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	10162	11813	13180	11598	12948	14419	14291	14777	15967	14170	13884
New Brunswick	561	556	559	786	1572	1336	1399	1418	1443	1446	1455
Nova Scotia	2407	2896	3002	3131	3219	3296	3356	3444	3588	3741	3856
Ontario[b]	7194	8361	9619	7681	8157	9787	9536	9915	10936	8983	8573
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	10162	11813	13180	11598	12948	14419	14291	14777	15967	14170	13884
Mexico											
WSCC-MEX	0	0	0	0	0	368	736	919	1226	1471	1839
NERC-Total[a]	248579	263167	272178	271902	274608	280249	284376	286952	296264	300679	306001
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] ECAR does not identify coal sources. See Table 47 for ECAR total coal requirements.
[b] Bituminous coal from the United States.

Table 51

Oil Requirements by Type - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
Distillate Oil	11508	9310	9141	9921	10748	11459	10256	11246	12796	14518	15496
Distillate Oil-ST	5907	3607	3664	3810	3745	3914	4013	4253	4395	4650	4751
Distillate Oil-CT	5152	5101	4953	4896	5052	4883	5254	5637	6917	8013	8634
Distillate Oil-CC	449	602	524	1215	1951	2662	989	1356	1484	1855	2111
Residual Oil	166405	153602	128482	117046	120393	121181	111203	116576	122885	130345	133589
Residual Oil-ST	166264	153081	127970	116518	119848	120631	110662	116060	122383	129825	133097
Residual Oil-CT	27	18	18	18	18	18	18	18	18	18	18
Residual Oil-CC	114	503	494	510	527	532	523	498	484	502	474
Crude Oil-ST	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	177913	162912	137623	126967	131141	132640	121459	127822	135681	144863	149085
Canada											
Distillate Oil	829	1012	1141	1167	1340	1392	1750	2252	2476	2545	2889
Distillate Oil-ST	330	315	309	287	289	307	303	310	339	287	275
Distillate Oil-CT	499	697	832	880	1051	1085	1447	1942	2137	2258	2614
Distillate Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Residual Oil	17965	15927	15880	14301	13581	12937	13861	14181	15276	14595	14836
Residual Oil-ST	17835	15787	15740	14161	13441	12797	13721	14041	15136	14455	14696
Residual Oil-CT	130	140	140	140	140	140	140	140	140	140	140
Residual Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Crude Oil-ST	96	0	0	0	1765	4833	4847	4833	4833	4833	4847
TOTAL(Canada)	18890	16939	17021	15468	16686	19162	20458	21266	22585	21973	22572
Mexico											
Distillate Oil	104	136	136	0	0	0	0	0	0	0	0
Distillate Oil-ST	0	0	0	0	0	0	0	0	0	0	0
Distillate Oil-CT	104	136	136	0	0	0	0	0	0	0	0
Distillate Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Residual Oil	1993	3952	4695	5556	6112	5941	3750	1993	2358	3024	3447
Residual Oil-ST	1993	3952	4695	5556	6112	5941	3750	1993	2358	3024	3447
Residual Oil-CT	0	0	0	0	0	0	0	0	0	0	0
Residual Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Crude Oil-ST	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Mexico)	2097	4088	4831	5556	6112	5941	3750	1993	2358	3024	3447
ASCC											
Distillate Oil	2	3	3	3	3	3	3	3	3	3	3
Distillate Oil-ST	1	1	1	1	1	1	1	1	1	1	1
Distillate Oil-CT	1	2	2	2	2	2	2	2	2	2	2
Distillate Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Residual Oil	184	201	187	194	201	208	215	228	241	255	269
Residual Oil-ST	0	0	0	0	0	0	0	0	0	0	0
Residual Oil-CT	184	201	187	194	201	208	215	228	241	255	269
Residual Oil-CC	0	0	0	0	0	0	0	0	0	0	0
Crude Oil-ST	0	0	0	0	0	0	0	0	0	0	0
TOTAL(ASCC)	186	204	190	197	204	211	218	231	244	258	272

Table 52

Oil Requirements by Region - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	1074	2114	2109	2399	1980	2208	2290	2596	2937	3637	3230
ERCOT	830	976	994	999	1016	999	993	1017	1022	1009	1158
MAAC	19241	21755	20907	21454	21864	23603	22149	26881	30752	30774	31412
MAIN	2286	1194	1403	1636	2097	2101	2952	3002	3405	4649	4802
Cmnwlth Edison	1799	685	780	905	1420	1360	1905	2215	2560	3490	3835
East Missouri	90	151	231	249	170	229	249	200	180	311	184
S Cent Illinois	304	200	218	341	396	408	685	462	545	731	636
Wis-Upper Mich	93	158	174	141	111	104	113	125	120	117	147
MAPP-US	467	561	580	629	659	695	759	873	961	999	1114
NPCC-US	99678	90431	69612	57439	58643	53761	56881	57779	63490	65298	70300
New York	54260	52958	40765	27986	27268	19662	21396	20611	22680	20588	22168
NEPOOL	45418	37473	28847	29453	31375	34099	35485	37168	40810	44710	48132
SERC	43676	44080	40124	40397	42813	47121	33034	32982	30462	35468	34326
Florida	40496	37967	36029	37512	39865	44075	28639	28239	24502	27608	24589
Southern	445	377	473	430	383	422	479	620	713	984	1004
TVA	339	798	831	508	649	835	1076	1242	1457	1251	1306
VACAR	2396	4938	2791	1947	1916	1789	2840	2881	3790	5625	7427
SPP	1892	306	333	397	425	424	514	672	627	765	866
Southeast	1577	76	78	85	102	113	101	208	120	156	215
West Central	114	64	64	64	64	65	88	131	135	135	135
Northern	201	166	191	248	259	246	325	333	372	474	516
WSCC-US	8769	1495	1561	1617	1644	1728	1887	2020	2025	2264	1877
NW Power Pool	279	66	66	68	68	68	68	68	68	68	68
Rocky Mtn	1181	24	24	33	33	33	33	33	33	33	33
Ariz-N. Mex	153	151	301	407	480	573	657	795	746	938	693
Calif-So. Nev	7156	1254	1170	1109	1063	1054	1129	1124	1178	1225	1083
Total(U.S.)	177913	162912	137623	126967	131141	132640	121459	127822	135681	144863	149085
Canada											
MAPP-CAN	46	52	54	53	55	56	59	59	61	62	61
NPCC-CAN	18844	16887	16967	15415	16631	19106	20399	21207	22524	21911	22511
New Brunswick	9633	10287	10321	10355	11390	13531	14610	15293	15778	16464	17138
Nova Scotia	3666	3737	3743	3699	3788	3809	3955	4277	4188	4099	4228
Ontario	2535	2393	2433	891	983	1296	1364	1167	2088	878	675
Quebec	3010	470	470	470	470	470	470	470	470	470	470
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	18890	16939	17021	15468	16686	19162	20458	21266	22585	21973	22572
Mexico											
WSCC-MEX	2097	4088	4831	5556	6112	5941	3750	1993	2358	3024	3447
NERC-Total	198900	183939	159475	147991	153939	157743	145667	151081	160624	169860	175104
ASCC	186	204	190	197	204	211	218	231	244	258	272

Table 53

Distillate Oil Requirements[a] - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	106	783	786	818	694	794	864	953	1215	1736	1764
ERCOT	585	746	763	763	786	769	760	778	783	774	928
MAAC	2718	1995	1473	1616	1497	1663	1530	2166	2872	3037	3648
MAIN	669	427	536	526	431	484	592	506	466	619	465
Cmnwlth Edison	326	15	20	30	45	50	80	70	60	50	45
East Missouri	90	151	231	249	170	229	249	200	180	311	184
S Cent Illinois	160	103	111	106	105	101	150	111	106	141	89
Wis-Upper Mich	93	158	174	141	111	104	113	125	120	117	147
MAPP-US	461	521	545	586	620	649	702	788	906	995	1110
NPCC-US	1482	1352	1113	1117	1128	1148	1160	1175	1202	1235	1267
New York	905	450	257	257	257	257	257	257	257	257	257
NEPOOL	577	902	856	860	871	891	903	918	945	978	1010
SERC	3530	2519	2927	3381	4415	4797	3316	3292	3917	4307	4578
Florida	1828	510	776	1477	2352	2940	1101	815	641	813	826
Southern	395	289	353	332	284	277	270	272	272	273	276
TVA	339	798	831	508	649	835	1076	1242	1457	1251	1306
VACAR	968	922	967	1064	1130	745	869	963	1547	1970	2170
SPP	555	289	316	379	404	377	440	557	510	702	760
Southeast	321	76	78	[illegible]	102	113	101	177	105	142	158
West Central	63	53	53	[illegible]	53	54	66	88	91	91	91
Northern	171	160	185	[illegible]	[illegible]	210	273	292	314	469	511
WSCC-US	1402	678	682	735	773	778	892	1031	925	1113	976
NW Power Pool	9	36	36	36	36	36	36	36	36	36	36
Rocky Mtn	1178	24	24	33	33	33	33	33	33	33	33
Ariz-N. Mex	40	11	51	134	211	218	305	447	371	557	418
Calif-So. Nev	175	607	571	532	493	491	518	515	485	487	489
TOTAL(U.S.)	11508	9310	9141	9921	10748	11459	10256	11246	12796	14518	15496
Canada											
MAPP-CAN	46	52	54	53	55	56	59	59	61	62	61
NPCC-CAN	783	960	1087	1114	1285	1336	1691	2193	2415	2483	2828
New Brunswick	37	97	257	323	505	531	789	1032	1251	1458	1700
Nova Scotia	72	185	158	140	127	135	220	479	408	377	491
Ontario	374	348	342	321	323	340	352	352	426	318	307
Quebec	300	330	330	330	330	330	330	330	330	330	330
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	829	1012	1141	1167	1340	1392	1750	2252	2476	[illegible]	2889
Mexico											
WSCC-MEX	104	136	136	0	0	0	0	0	0	0	0
NERC-Total	12441	10458	10418	11088	12088	12851	12006	13498	15272	17063	18385
ASCC	2	3	3	3	3	3	3	3	3	3	3

---

[a] Oil used in steam, combustion turbine (including diesel), and combined cycle generating units.

Table 54

Distillate Oil Requirements - Steam - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	522	664	664	664	664	664	664	664	664	673	733
MAAC	1162	617	663	674	711	783	745	885	926	895	952
MAIN	576	308	388	417	331	355	364	334	324	378	303
Cmnwlth Edison	293	0	0	0	0	0	0	0	0	0	0
East Missouri	72	132	210	230	151	177	199	164	151	215	147
S Cent Illinois	154	100	102	99	98	97	77	81	83	76	69
Wis-Upper Mich	57	76	76	88	82	81	88	89	90	87	87
MAPP-US	317	333	339	348	[illegible]	349	359	369	392	409	410
NPCC-US	234	183	140	143	152	166	173	181	199	219	236
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	234	183	140	143	152	166	173	181	199	219	236
SERC	1383	1223	1162	1192	1175	1205	1203	1251	1306	1335	1387
Florida	390	111	113	115	103	107	122	132	140	139	164
Southern	287	250	250	250	250	243	236	236	237	237	237
TVA	267	389	373	373	378	375	363	360	365	366	368
VACAR	439	473	426	454	444	480	482	523	564	593	618
SPP	492	244	256	253	256	255	283	362	341	377	389
Southeast	303	66	67	67	66	65	67	111	88	104	124
West Central	63	53	53	53	53	54	66	88	91	91	91
Northern	126	125	136	133	137	136	150	163	162	182	174
WSCC-US	1221	35	52	119	110	137	222	207	243	364	341
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	1178	24	24	30	30	30	30	30	30	30	30
Ariz-N. Mex	35	11	28	89	80	107	192	177	213	334	311
Calif-So. Nev	8	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	5907	3607	3664	3810	3745	3914	4013	4253	4395	4650	4751
Canada											
MAPP-CAN	11	11	11	10	10	11	11	11	13	12	11
NPCC-CAN	319	304	298	277	279	296	292	299	326	275	264
New Brunswick	23	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	296	304	298	277	279	296	292	299	326	275	264
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	330	315	309	287	289	307	303	310	339	287	275
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	6237	3922	3973	4097	4034	4221	4316	4563	4734	4937	5026
ASCC	1	1	1	1	1	1	1	1	1	1	1

Distillate Oil Requirements - Combustion Turbine[a] - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	106	783	786	818	694	794	864	953	1215	1736	1764
ERCOT	63	82	99	99	122	105	96	114	119	101	195
MAAC	1367	1079	588	692	598	604	507	713	1232	1238	1675
MAIN	93	119	148	109	100	129	228	172	142	241	162
Cmnwlth Edison	33	15	20	30	45	50	80	70	60	50	45
East Missouri	18	19	21	19	19	52	50	36	29	96	37
S Cent Illinois	6	3	9	7	7	4	73	30	23	65	20
Wis-Upper Mich	36	82	98	53	29	23	25	36	30	30	60
MAPP-US	136	186	204	231	272	298	330	406	501	573	680
NPCC-US	1058	87[illegible]	684	684	685	689	692	696	701	709	718
New York	905	45[illegible]	257	257	257	257	257	257	257	257	257
NEPOOL	153	428	427	427	428	432	435	439	444	452	461
SERC	2092	1296	1765	1531	1786	1542	1767	1656	2255	2480	2612
Florida	1430	399	663	704	795	783	633	298	145	182	83
Southern	108	39	103	82	34	34	34	36	35	36	39
TVA	72	409	458	135	271	460	713	882	1092	885	938
VACAR	482	449	541	610	686	265	387	440	983	1377	1552
SPP	61	35	49	116	137	89	114	125	90	210	196
Southeast	16	0	0	8	26	38	24	56	7	28	24
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	45	35	49	108	111	51	90	69	83	182	172
WSCC-US	176	643	630	616	658	633	656	802	662	725	632
NW Power Pool	9	36	36	36	36	36	36	36	36	36	36
Rocky Mtn	0	0	0	3	3	3	3	3	3	3	3
Ariz-N. Mex	0	0	23	45	126	103	99	248	138	199	104
Calif-So. Nev	167	607	571	532	493	491	518	515	485	487	489
TOTAL(U.S.)	5152	5101	4953	4896	5052	4883	5254	5637	6917	8013	8634
Canada											
MAPP-CAN	35	41	43	43	45	45	48	48	48	50	50
NPCC-CAN	464	656	789	837	1006	1040	1399	1894	2089	2208	2564
New Brunswick	14	97	257	323	505	531	789	1032	1251	1458	1700
Nova Scotia	72	185	158	140	127	135	220	479	408	377	491
Ontario	78	44	44	44	44	44	60	53	100	43	43
Quebec	300	330	330	330	330	330	330	330	330	330	330
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	499	697	832	880	1051	1085	1447	1942	2137	2258	2614
Mexico											
WSCC-MEX	104	136	136	0	0	0	0	0	0	0	0
NERC-Total	5755	5934	5921	5776	6103	5968	6701	7579	9054	10271	11248
ASCC	1	2	2	2	2	2	2	2	2	2	2

---

[a] Includes diesel generating units.

Table 56

Distillate Oil Requirements - Combined Cycle - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	189	299	222	250	188	276	278	568	714	904	1021
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	8	2	2	7	2	2	13	13	13	13	20
NPCC-US	190	291	289	290	291	293	295	298	302	307	313
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	190	291	289	290	291	293	295	298	302	307	313
SERC	55	0	0	658	1454	2050	346	385	356	492	579
Florida	8	0	0	658	1454	2050	346	385	356	492	579
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	47	0	0	0	0	0	0	0	0	0	0
SPP	2	10	11	10	11	33	43	70	79	115	175
Southeast	2	10	11	10	10	10	10	10	10	10	10
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	1	23	33	60	69	105	165
WSCC-US	5	0	0	0	5	8	14	22	20	24	3
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	5	0	0	0	5	8	14	22	20	24	3
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	449	602	524	1215	1951	2662	989	1356	1484	1855	2111
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	449	602	524	1215	1951	2662	989	1356	1484	1855	2111
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 57

Residual Oil Requirements[a] - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	968	1331	1323	1581	1286	1414	1426	1643	1722	1901	1466
ERCOT	245	230	231	236	230	230	233	239	239	235	230
MAAC	16523	19760	19434	19838	20367	21940	20619	24715	27880	27737	27764
MAIN	1617	767	867	1110	1666	1617	2360	2496	2939	4030	4337
Cmnwlth Edison	1473	670	760	875	1375	1310	1825	2145	2500	3440	3790
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	144	97	107	235	291	307	535	351	439	590	547
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	6	40	35	43	39	46	57	85	55	4	4
NPCC-US	98196	89079	68499	56322	57515	52613	55721	56604	62288	64063	69033
New York	53355	52508	40508	27729	27011	19405	21139	20354	22423	20331	21911
NEPOOL	44841	36571	27991	28593	30504	33208	34582	36250	39865	43732	47122
SERC	40146	41561	37197	37016	38398	42324	29718	29690	26545	31161	29748
Florida	38668	37457	35253	36035	37513	41135	27538	27424	23861	26795	23763
Southern	50	88	120	98	99	145	209	348	441	711	728
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	1428	4016	1824	883	786	1044	1971	1918	2243	3655	5257
SPP	1337	17	17	18	21	47	74	115	117	63	106
Southeast	1256	0	0	0	0	0	0	31	15	14	57
West Central	51	11	11	11	11	11	22	43	44	44	44
Northern	30	6	6	7	10	36	52	41	58	5	5
WSCC-US	7367	817	879	882	871	950	995	989	1100	1151	901
NW Power Pool	270	30	30	32	32	32	32	32	32	32	32
Rocky Mtn	3	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	113	140	250	273	269	355	352	348	375	381	275
Calif-So. Nev	6981	647	599	577	570	563	611	609	693	738	594
TOTAL(U.S.)	166405	153602	128482	117046	120393	121181	111203	116576	122885	130345	133589
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	17965	15927	15880	14301	13581	12937	13861	14181	15276	14595	14836
New Brunswick	9500	10190	10064	10032	9120	8167	8974	9428	9694	10173	10591
Nova Scotia	3594	3552	3585	3559	3661	3674	3735	3798	3780	3722	3737
Ontario	2161	2045	2091	570	660	956	1012	815	1662	560	368
Quebec	2710	140	140	140	140	140	140	140	140	140	140
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	17965	15927	15880	14301	13581	12937	13861	14181	15276	14595	14836
Mexico											
WSCC-MEX	1993	3952	4695	5556	[illegible]	5941	3750	1993	2358	3024	3447
NERC-Total	186363	173481	149057	136903	[illegible]	140059	128814	132750	140519	147964	151872
ASCC	184	201	187	194	201	208	215	228	241	255	269

---

[a] Oil used in steam, combustion turbine (including diesel), and combined cycle generating units.

Table 58

Residual Oil Requirements - Steam - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	968	1331	1323	1581	1286	1414	1426	1643	1722	1901	1466
ERCOT	245	230	231	236	230	230	233	239	239	235	230
MAAC	16507	19760	19434	19838	20367	21940	20619	24715	27880	27737	27764
MAIN	1617	767	867	1110	1666	1617	2360	2496	2939	4030	4337
Cmnwlth Edison	1473	670	760	875	1375	1310	1825	2145	2500	3440	3790
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	144	97	107	235	291	307	535	351	439	590	547
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	6	40	35	43	39	46	57	85	55	4	4
NPCC-US	98082	88904	68326	56148	57340	52437	55544	56425	62107	63879	68845
New York	53355	52508	40508	27729	27011	19405	21139	20354	22423	20331	21911
NEPOOL	44727	36396	27818	28419	30329	33032	34405	36071	39684	43548	46934
SERC	40143	41251	36894	36701	38067	41989	29393	29392	26263	30867	29486
Florida	38665	37147	34950	35720	37182	40800	27213	27126	23579	26501	23501
Southern	50	88	120	98	99	145	209	348	441	711	728
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	1428	4016	1824	883	786	1044	1971	1918	2243	3655	5257
SPP	1337	17	17	18	21	47	74	115	117	63	106
Southeast	1256	0	0	0	0	0	0	31	15	14	57
West Central	51	11	11	11	11	11	22	43	44	44	44
Northern	30	6	6	7	10	36	52	41	58	5	5
WSCC-US	7359	781	843	843	832	911	956	950	1061	1109	859
NW Power Pool	270	30	30	32	32	32	32	32	32	32	32
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	108	140	250	273	269	355	352	348	375	381	275
Calif-So. Nev	6981	611	563	538	531	524	572	570	654	696	552
TOTAL(U.S.)	166264	153081	127970	116518	119848	120631	110662	116060	122383	129825	133097
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	17835	15787	15740	14161	13441	12797	13721	14041	15136	14455	14696
New Brunswick	9500	10190	10064	10032	9120	8167	8974	9428	9694	10173	10591
Nova Scotia	3594	3552	3585	3559	3661	3674	3735	3798	3780	3722	3737
Ontario	2161	2045	2091	570	660	956	1012	815	1662	560	368
Quebec	2580	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	17835	15787	15740	14161	13441	12797	13721	14041	15136	14455	14696
Mexico											
WSCC-MEX	1993	3952	4695	5556	6112	5941	3750	1993	2358	3024	3447
NERC-Total	186092	172820	148405	136235	139401	139369	128133	132094	139877	147304	151240
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 59

Residual Oil Requirements - Combustion Turbine[a] - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	16	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	3	0	0	0	0	0	0	0	0	0	0
Florida	3	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US	8	18	18	18	18	18	18	18	18	18	18
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	3	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	5	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	18	18	18	18	18	18	18	18	18	18
TOTAL(U.S.)	27	18	18	18	18	18	18	18	18	18	18
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	130	140	140	140	140	140	140	140	140	140	140
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	130	140	140	140	140	140	140	140	140	140	140
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	130	140	140	140	140	140	140	140	140	140	140
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	157	158	158	158	158	158	158	158	158	158	158
ASCC	184	201	187	194	201	208	215	228	241	255	269

[a] Includes diesel generating units.

Table 60

Residual Oil Requirements - Combined Cycle - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	114	175	173	174	175	176	177	179	181	184	188
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	114	175	173	174	175	176	177	179	181	184	188
SERC	0	310	303	315	331	335	325	298	282	294	262
Florida	0	310	303	315	331	335	325	298	282	294	262
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US	0	18	18	21	21	21	21	21	21	24	24
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	18	18	21	21	21	21	21	21	24	24
TOTAL(U.S.)	114	503	494	510	527	532	523	498	484	502	474
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	114	503	494	510	527	532	523	498	484	502	474
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 61

Crude Oil Requirements - 1000s Barrels

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	0	0
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US	0	0	0	0	0	0	0	0	0	0	0
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	0	0	0	0	0	0	0	0	0	0
TOTAL(U.S.)	0	0	0	0	0	0	0	0	0	0	0
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	96	0	0	0	1765	4833	4847	4833	4833	4833	4847
New Brunswick	96	0	0	0	1765	4833	4847	4833	4833	4833	4847
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	96	0	0	0	1765	4833	4847	4833	4833	4833	4847
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	96	0	0	0	1765	4833	4847	4833	4833	4833	4847
ASCC	0	0	0	0	0	0	0	0	0	0	0

Table 62

Natural Gas Requirements by Type - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
Firm Natural Gas	1845265	1792066	1787934	1831105	1925095	1951046	1990475	2080295	2163017	2202185	2247557
Firm Nat.Gas-ST	1733515	1675292	1658881	1693681	1773377	1795739	1824556	1876512	1917150	1939111	1949672
Firm Nat.Gas-CT	16036	19845	21290	15810	17981	16161	18463	28522	42733	55119	70495
Firm Nat.Gas-CC	95714	96929	107763	121614	133737	139146	147456	175261	203134	207955	227390
Inter.Natural Gas	814311	711359	762516	845080	863098	904092	1079334	1108673	1110719	1208268	1232485
Inter.Nat.Gas-ST	735081	584825	640110	675849	682098	697416	760942	761349	739879	768968	701788
Inter.Nat.Gas-CT	34737	53822	52588	65531	73390	83693	113117	136152	136333	180059	208972
Inter.Nat.Gas-CC	44493	72712	69818	103700	107610	122983	205275	211172	234507	259241	321725
TOTAL(U.S.)	2659576	2503425	2550450	2676185	2788193	2855138	3069809	3188968	3273736	3410453	3480042
Canada											
Firm Natural Gas	34378	18606	19226	21581	29082	39123	46697	53161	64601	72560	75554
Firm Nat.Gas-ST	24401	10990	11511	14589	21407	30605	37793	44797	55016	61963	64332
Firm Nat.Gas-CT	9977	7616	7715	6992	7675	8518	8904	8364	9585	10597	11222
Firm Nat.Gas-CC	0	0	0	0	0	0	0	0	0	0	0
Inter.Natural Gas	12453	27979	32682	35428	43084	47230	60589	60565	60565	60565	60577
Inter.Nat.Gas-ST	12453	27979	32682	32680	32680	36718	50065	50065	50065	50065	50065
Inter.Nat.Gas-CT	0	0	0	2748	10404	10512	10524	10500	10500	10500	10512
Inter.Nat.Gas-CC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Camada)	46831	46585	51908	57009	72166	86353	107286	113726	125166	133125	136131
Mexico											
Firm Natural Gas	0	0	0	0	0	0	0	0	0	0	0
Firm Nat.Gas-ST	0	0	0	0	0	0	0	0	0	0	0
Firm Nat.Gas-CT	0	0	0	0	0	0	0	0	0	0	0
Firm Nat.Gas-CC	0	0	0	0	0	0	0	0	0	0	0
Inter.Natural Gas	0	0	0	0	0	0	0	0	0	0	0
Inter.Nat.Gas-ST	0	0	0	0	0	0	0	0	0	0	0
Inter.Nat.Gas-CT	0	0	0	0	0	0	0	0	0	0	0
Inter.Nat.Gas-CC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Mexico)	0	0	0	0	0	0	0	0	0	0	0
ASCC											
Firm Natural Gas	33886	30515	28099	28467	29795	29262	29902	30515	30820	31370	32296
Firm Nat.Gas-ST	0	0	0	0	0	0	0	0	0	0	0
Firm Nat.Gas-CT	16115	8746	7731	6999	8410	8787	9321	8724	9294	10651	10616
Firm Nat.Gas-CC	17771	21769	20368	21468	21385	20475	20581	21791	21526	20719	21680
Inter.Natural Gas	23	23	23	23	23	23	23	23	23	23	23
Inter.Nat.Gas-ST	0	0	0	0	0	0	0	0	0	0	0
Inter.Nat.Gas-CT	23	23	23	23	23	23	23	23	23	23	23
Inter.Nat.Gas-CC	0	0	0	0	0	0	0	0	0	0	0
TOTAL(ASCC)	33909	30538	28122	28490	29818	29285	29925	30538	30843	31393	32319

Table 63

Natural Gas Requirements by Region - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	6879	7741	9799	14155	16505	19968	28106	34803	37918	56967	46954
ERCOT	824977	789356	809112	792497	840592	843621	868081	918829	926439	933784	895115
MAAC	77268	61152	63550	70508	71905	92584	111435	136232	124499	140130	150689
MAIN	9757	5065	5956	6139	8480	10906	21825	25822	25131	32938	39507
Cmnwlth Edison	5506	225	270	375	625	720	1105	1795	2915	4340	5765
East Missouri	658	19	19	19	19	19	19	19	19	19	19
S Cent Illinois	1812	1650	2003	1503	1373	1720	6297	5354	7039	12793	15458
Wis-Upper Mich	1781	3171	3664	4242	6463	8447	14404	18654	15158	15786	18265
MAPP-US	9594	9438	11367	11366	11425	12812	14703	15758	17240	18782	21583
NPCC-US	291089	271167	259926	264832	257307	247260	246746	246279	248136	248950	249944
New York	223798	215500	204547	209283	201533	191124	190216	189205	190415	190339	190110
NEPOOL	67291	55667	55379	55549	55774	56136	56530	57074	57721	58611	59834
SERC	219167	200056	215216	250297	255076	265360	363638	346246	338678	370562	369438
Florida	179950	179779	181226	215499	213021	213221	315536	298413	276727	288978	277120
Southern	23950	11116	15807	14459	20127	26163	24734	29970	38160	49373	56179
TVA	1502	210	431	658	1130	1307	1593	1691	3402	6992	10496
VACAR	13765	8951	17752	19681	20798	24669	21775	16172	20389	25219	25643
SPP	672382	630512	639857	656690	684336	698395	717423	740513	768122	807841	829811
Southeast	410808	384712	403112	387917	390336	399858	403102	408325	436986	446199	445442
West Central	235115	226165	220772	242770	261743	265695	276201	288390	290175	314172	333990
Northern	26459	19635	15973	26003	32257	32842	38120	43798	40961	47470	50379
WSCC-US	548463	528938	535667	609701	642567	664232	697852	724486	787573	800499	877001
NW Power Pool	24459	81495	86992	87827	88477	88223	91424	91643	97529	103706	104948
Rocky Mtn	5096	2954	2769	2875	3761	3078	3117	7946	9295	9319	9456
Ariz-N. Mex	52097	49225	55709	60409	64763	71579	70176	84399	85150	91116	103796
Calif-So. Nev	466811	395264	390197	458590	485566	501352	533135	540498	595599	596358	658801
Total(U.S.)	2659576	2503425	2550450	2676185	2788193	2855138	3069809	3188968	3273736	3410453	3480042
Canada											
MAPP-CAN	8249	8249	8247	6253	8134	9484	8990	4346	5552	6973	8425
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	38582	38336	43661	50756	64032	76869	98296	109380	119614	126152	127706
Total(CANADA)	46831	46585	51908	57009	72166	86353	107286	113726	125166	133125	136131
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	2706407	2550010	2602358	2733194	2860359	2941491	3177095	3302694	3398902	3543578	3616173
ASCC	33909	30538	28122	28490	29818	29285	29925	30538	30843	31393	32319

Table 64

Firm Natural Gas Requirements[a] - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	753063	745498	771546	763656	809105	812302	835798	883291	890674	895315	851661
MAAC	90	0	0	0	0	0	0	0	0	0	0
MAIN	5627	753	996	902	890	1203	1567	2153	3322	4867	6651
Cmnwlth Edison	5506	225	270	375	625	720	1105	1795	2915	4340	5765
East Missouri	4	19	19	19	19	19	19	19	19	19	19
S Cent Illinois	22	419	617	418	156	374	353	249	298	418	777
Wis-Upper Mich	95	90	90	90	90	90	90	90	90	90	90
MAPP-US	3236	5010	5531	5970	6682	7335	8611	8888	10347	10456	12596
NPCC-US	209	209	7559	7559	7559	7559	7559	7559	7559	7559	7559
New York	209	209	7559	7559	7559	7559	7559	7559	7559	7559	7559
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC[b]	30898	8912	17647	19091	21743	25759	22765	17924	26776	37894	43224
Florida[b]	24009	0	0	0	0	0	0	0	0	0	0
Southern	465	531	348	35	771	988	1068	1168	4323	7928	9795
TVA	1502	210	431	658	1130	1307	1593	1691	3402	6992	10496
VACAR	4922	8171	16868	18398	19842	23464	20104	15065	19051	22974	22933
SPP	521289	541153	493548	472006	485144	495488	492961	514760	533086	548156	562994
Southeast	308459	327812	284263	263624	268456	277709	265022	278019	297331	296281	301104
West Central	207033	207119	204368	202444	209999	212128	219438	228419	228271	243569	253611
Northern	5797	6222	4917	5938	6689	5651	8501	8322	7484	8306	8279
WSCC-US	530853	490531	491107	561921	593972	601400	621214	645720	691253	697938	762872
NW Power Pool	16402	46292	46498	45338	45923	44246	45855	45702	45312	45312	46224
Rocky Mtn	3340	2954	2769	2875	3761	3078	3117	7946	9295	9319	9456
Ariz-N. Mex	45903	48457	54106	57655	61316	66811	65434	79737	80448	86414	98592
Calif-So. Nev	465208	392828	387734	456053	482972	487265	506808	512335	556198	556893	608600
TOTAL(U.S.)[b]	1845265	1792066	1787934	1831105	1925095	1951046	1990475	2080295	2163017	2202185	2247557
Canada											
MAPP-CAN	8249	8249	8247	6253	8134	9484	8990	4346	5552	6973	8425
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	26129	10357	10979	15328	20948	29639	37707	48815	59049	65587	67129
TOTAL(Canada)	34378	18606	19226	21581	29082	39123	46697	53161	64601	72560	75554
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[b]	1879643	1810672	1807160	1852686	1954177	1990169	2037172	2133456	2227618	2274745	2323111
ASCC	33886	30515	28099	28467	29795	29262	29902	30515	30820	31370	32296

---

[a] Gas used in steam, combustion turbine (including diesel), and combined cycle generating units.

[b] Florida does not differentiate between Firm and Interruptible natural gas. All projected natural gas requirements are reported as Interruptible. (See Table 68.)

Table 65

Firm Natural Gas Requirements - Steam - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	731933	730975	752973	743772	783792	795875	820548	841314	823337	825921	777264
MAAC	90	0	0	0	0	0	0	0	0	0	0
MAIN	5436	490	690	490	100	100	100	100	100	115	490
Cmnwlth Edison	5341	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	400	600	400	10	10	10	10	10	25	400
Wis-Upper Mich	95	90	90	90	90	90	90	90	90	90	90
MAPP-US	2204	2978	3116	3246	3629	3917	4017	3985	4204	4310	5046
NPCC-US	167	167	7517	7517	7517	7517	7517	7517	7517	7517	7517
New York	167	167	7517	7517	7517	7517	7517	7517	7517	7517	7517
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC[a]	20066	643	4927	2729	5053	6508	4158	28	28	28	28
Florida[a]	19601	0	0	0	0	0	0	0	0	0	0
Southern	465	531	348	35	28	28	28	28	28	28	28
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	112	4579	2694	5025	6480	4130	0	0	0	0
SPP	490379	509263	462603	439660	453855	463676	457791	476912	498004	510545	520078
Southeast	306477	327133	283661	262715	267221	275908	262501	274594	294054	293154	297775
West Central	178314	176025	174147	171175	180160	182317	187039	194256	196761	209365	214274
Northern	5588	6105	4795	5770	6474	5451	8251	8062	7189	8026	8029
WSCC-US	483240	430776	427055	496267	519431	518146	530425	546656	583960	590675	639249
NW Power Pool	16402	46292	46498	45338	45923	44246	45855	45702	45312	45312	46224
Rocky Mtn	3229	2690	2505	2700	2630	2577	2577	2577	2577	2577	2577
Ariz-N. Mex	23894	26975	32061	34640	37427	40978	39237	44630	40936	43074	43337
Calif-So. Nev	439715	354819	345991	413589	433451	430345	442756	453747	495135	499712	547111
TOTAL(U.S.)[a]	1733515	1675292	1658881	1693681	1773377	1795739	1824556	1876512	1917150	1939111	1949672
Canada											
MAPP-CAN	4877	4877	4875	3875	5685	6432	6044	2607	3423	4346	5195
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	19524	6113	6636	10714	15722	24173	31749	42190	51593	57617	59137
TOTAL(Canada)	24401	10990	11511	14589	21407	30605	37793	44797	55016	61963	64332
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[a]	1757916	1686282	1670392	1708270	1794784	1826344	1862349	1921309	1972166	2001074	2014004
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Florida does not differentiate between Firm and Interruptible natural gas. All projected natural gas requirements are reported as Interruptible. (See Table 69.)

Table 66

Firm Natural Gas Requirements - Combustion Turbine[a] - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	4530	650	597	906	3989	2783	2394	4768	2549	3290	5107
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	191	263	306	412	670	773	1157	1850	3019	4487	5896
Cmnwlth Edison	165	225	270	375	625	720	1105	1795	2915	4340	5765
East Missouri	4	19	19	19	19	19	19	19	19	19	19
S Cent Illinois	22	19	17	18	26	34	33	36	85	128	112
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	762	1747	2130	2439	2748	3113	4289	4598	5817	5820	7224
NPCC-US	42	42	42	42	42	42	42	42	42	42	42
New York	42	42	42	42	42	42	42	42	42	42	42
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC[b]	3774	270	527	791	1305	1697	2866	3005	10084	16413	20943
Florida[b]	1966	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	1318	2931	4610
TVA	1502	210	431	658	1130	1307	1593	1691	3402	6992	10496
VACAR	306	60	96	133	175	390	1273	1314	5364	6490	5837
SPP	1682	2414	2644	2102	2025	2033	2068	2116	2433	2742	2886
Southeast	133	129	131	134	136	139	142	145	148	151	154
West Central	1340	2168	2391	1800	1674	1694	1876	1911	2215	2511	2682
Northern	209	117	122	168	215	200	50	60	70	80	50
WSCC-US	5055	14459	15044	9118	7202	5720	5647	12143	18789	22325	28397
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	111	264	264	175	1131	501	540	5369	6718	6742	6879
Ariz-N. Mex	1588	1002	1140	1666	4296	3715	3516	5094	10343	13815	19691
Calif-So. Nev	3356	13193	13640	7277	1775	1504	1591	1680	1728	1768	1827
TOTAL(U.S.)[b]	16036	19845	21290	15810	17981	16161	18463	28522	42733	55119	70495
Canada											
MAPP-CAN	3372	3372	3372	2378	2449	3052	2946	1739	2129	2627	3230
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	6605	4244	4343	4614	5226	5466	5958	6625	7456	7970	7992
TOTAL(Canada)	9977	7616	7715	6992	7675	8518	8904	8364	9585	10597	11222
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[b]	26013	27461	29005	22802	25656	24679	27367	36886	52318	65716	81717
ASCC	16115	8746	7731	6999	8410	8787	9321	8724	9294	10651	10616

[a] Includes diesel generating units.

[b] Florida does not differentiate between Firm and Interruptible natural gas. All projected natural gas requirements are reported as Interruptible. (See Table 70.)

Table 67

Firm Natural Gas Requirements - Combined Cycle - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	16600	13873	17976	18978	21324	13644	12856	37209	64788	66104	69290
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	120	330	310	203	203	265	265
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	120	330	310	203	203	265	265
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	270	285	285	285	305	305	305	305	326	326	326
NPCC-US	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	0	0	0	0	0	0	0	0	0	0	0
SERC[a]	7058	7999	12193	15571	15385	17554	15741	14891	16664	21453	22253
Florida[a]	2442	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	743	960	1040	1140	2977	4969	5157
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	4616	7999	12193	15571	14642	16594	14701	13751	13687	16484	17096
SPP	29228	29476	28301	30244	29264	29779	33102	35732	32649	34869	40030
Southeast	1849	550	471	775	1099	1662	2379	3280	3129	2976	3175
West Central	27379	28926	27830	29469	28165	28117	30523	32252	29295	31693	36655
Northern	0	0	0	0	0	0	200	200	225	200	200
WSCC-US	42558	45296	49008	56536	67339	77534	85142	86921	88504	84938	95226
NW Power Pool	0	0	0	0	0	0	0	0	0	0	0
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	20421	20480	20905	21349	19593	22118	22681	30013	29169	29525	35564
Calif-So. Nev	22137	24816	28103	35187	47746	55416	62461	56908	59335	55413	59662
TOTAL(U.S.)[a]	95714	96929	107763	121614	133737	139146	147456	175261	203134	207955	227390
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[a]	95714	96929	107763	121614	133737	139146	147456	175261	203134	207955	227390
ASCC	17771	21769	20368	21468	21385	20475	20581	21791	21526	20719	21680

[a] Florida does not differentiate between Firm and Interruptible natural gas. All projected natural gas requirements are reported as Interruptible. (See Table 71.)

Table 68

Interruptible Natural Gas Requirements[a] - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	6879	7741	9799	14155	16505	19968	28106	34803	37918	56967	46954
ERCOT	71914	43858	37566	28841	31487	31319	32283	35538	35765	38469	43454
MAAC	77178	61152	63550	70508	71905	92584	111435	136232	124499	140130	150689
MAIN	4130	4312	4960	5237	7590	9703	20258	23669	21809	28071	32856
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	654	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	1790	1231	1386	1085	1217	1346	5944	5105	6741	12375	14681
Wis-Upper Mich	1686	3081	3574	4152	6373	8357	14314	18564	15068	15696	18175
MAPP-US	6358	4428	5836	5396	4743	5477	6092	6870	6893	8326	8987
NPCC-US	290880	270958	252367	257273	249748	239701	239187	238720	240577	241391	242385
New York	223589	215291	196988	201724	193974	183565	182657	181646	182856	182780	182551
NEPOOL	67291	55667	55379	55549	55774	56136	56530	57074	57721	58611	59834
SERC[b]	188269	191144	197569	231206	233333	239601	340873	328322	311902	332668	326214
Florida[b]	155941	179779	181226	215499	213021	213221	315536	298413	276727	288978	277120
Southern	23485	10585	15459	14424	19356	25175	23666	28802	33837	41445	46384
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	8843	780	884	1283	956	1205	1671	1107	1338	2245	2710
SPP	151093	89359	146309	184684	199192	202907	224462	225753	235036	259685	266817
Southeast	102349	56900	118849	124293	121880	122149	138080	130306	139655	149918	144338
West Central	28082	19046	16404	40326	51744	53567	56763	59971	61904	70603	80379
Northern	20662	13413	11056	20065	25568	27191	29619	35476	33477	39164	42100
WSCC-US	17610	38407	44560	47780	48595	62832	76638	78766	96320	102561	114129
NW Power Pool	8057	35203	40494	42489	42554	43977	45569	45941	52217	58394	58724
Rocky Mtn	1756	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	6194	768	1603	2754	3447	4768	4742	4662	4702	4702	5204
Calif-So. Nev	1603	2436	2463	2537	2594	14087	26327	28163	39401	39465	50201
TOTAL(U.S.)[b]	814311	711359	762516	845080	863098	904092	1079334	1108673	1110719	1208268	1232485
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	12453	27979	32682	35428	43084	47230	60589	60565	60565	60565	60577
TOTAL(Canada)	12453	27979	32682	35428	43084	47230	60589	60565	60565	60565	60577
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[b]	826764	739338	795198	880508	906182	951322	1139923	1169238	1171284	1268833	1293062
ASCC	23	23	23	23	23	23	23	23	23	23	23

---

[a] Gas used in steam, combustion turbine (including diesel), and combined cycle generating units.

[b] Florida does not differentiate between Firm and Interruptible natural gas. All projected natural gas requirements are reported as Interruptible.

Table 69

Interuptible Natural Gas Requirements - Steam - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	3572	3810	4750	9262	10355	9247	13044	17813	18791	15742	5623
ERCOT	70173	31192	28031	20791	21089	22303	23711	25775	25735	25282	22778
MAAC	58389	44297	48459	50610	50370	66294	71885	82482	66613	69508	64071
MAIN	3434	2863	3280	3205	3285	3521	5249	4711	4958	6735	6895
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	649	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	1726	1052	1192	825	885	975	3645	2833	3304	4903	5125
Wis-Upper Mich	1059	1811	2088	2380	2400	2546	1604	1878	1654	1832	1770
MAPP-US	5213	3333	4704	4078	3447	3937	4428	4912	4897	5145	5150
NPCC-US	276034	253099	237964	241494	235416	229092	229057	228526	230279	230971	231797
New York	217408	204777	189866	193236	186966	180333	179957	178946	180156	180080	179851
NEPOOL	58626	48322	48098	48258	48450	48759	49100	49580	50123	50891	51946
SERC[a]	160232	156352	160657	156946	154428	157141	188522	174591	156659	166943	155822
Florida[a]	130325	145722	145168	142479	140001	140267	174427	158849	140152	149999	139803
Southern	23019	10528	15332	14320	14272	16682	13902	15642	16394	16839	15919
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	6888	102	157	147	155	192	193	100	113	105	100
SPP	148481	87853	144624	181278	195260	197263	216235	213214	222581	239246	200473
Southeast	102349	56900	118849	124293	121880	122149	138080	130306	139655	149918	144338
West Central	27972	19046	16404	40326	51744	53567	56763	59971	61904	66027	32727
Northern	18160	11907	9371	16659	21636	21547	21392	22937	21022	23301	23408
WSCC-US	9553	2026	7641	8185	8448	8618	8811	9325	9366	9396	9179
NW Power Pool	0	0	5168	5038	5103	4916	5095	5649	5600	5600	5713
Rocky Mtn	1756	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	6194	606	1043	1677	1835	2152	2126	2046	2086	2086	1716
Calif-So. Nev	1603	1420	1430	1470	1510	1550	1590	1630	1680	1710	1750
TOTAL(U.S.)[a]	735081	584825	640110	675849	682098	697416	760942	761349	739879	768968	701788
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	12453	27979	32682	32680	32680	36718	50065	50065	50065	50065	50065
TOTAL(Canada)	12453	27979	32682	32680	32680	36718	50065	50065	50065	50065	50065
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[a]	747534	612804	672792	708529	714778	734134	811007	811414	789944	819033	751853
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Florida does not differentiate between Firm and Interruptible natural gas. All projected natural gas requirements are reported as Interruptible.

Table 70

Interruptible Natural Gas Requirements - Combustion Turbine[a] - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	1287	1911	3029	2873	3380	7501	10062	13260	15067	36595	36621
ERCOT	155	5978	6579	6042	8140	6664	6249	7098	7280	6442	8901
MAAC	14543	11685	9781	15458	17713	20861	30010	41332	41418	47978	62331
MAIN	696	1449	1680	2032	4305	6182	15009	18958	16851	21336	25961
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	5	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	64	179	194	260	332	371	2299	2272	3437	7472	9556
Wis-Upper Mich	627	1270	1486	1772	3973	5811	12710	16686	13414	13864	16405
MAPP-US	1145	1095	1132	1318	1296	1540	1664	1958	1996	3181	3837
NPCC-US	6259	10834	7431	8797	7328	3552	3020	3020	3027	3032	3040
New York	6181	10514	7122	8488	7008	3232	2700	2700	2700	2700	2700
NEPOOL	78	320	309	309	320	320	320	320	327	332	340
SERC[b]	7909	5451	6920	10348	11531	14427	20767	21750	22430	31174	35813
Florida[b]	5488	4716	6066	9108	9106	9037	14016	12450	9660	11147	9457
Southern	466	57	127	104	1624	4377	5273	8293	11545	17887	23746
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	1955	678	727	1136	801	1013	1478	1007	1225	2140	2610
SPP	2008	1026	1191	2890	3389	4044	6125	8608	8096	10153	11385
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	110	0	0	0	0	0	0	0	0	0	0
Northern	1898	1026	1191	2890	3389	4044	6125	8608	8096	10153	11385
WSCC-US	735	14393	14845	15773	16308	18922	20211	20168	20168	20168	21083
NW Power Pool	735	14201	14255	14666	14666	16276	17550	17507	17507	17507	17550
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	162	560	1077	1612	2616	2616	2616	2616	2616	3488
Calif-So. Nev	0	30	30	30	30	30	45	45	45	45	45
TOTAL(U.S.)[b]	34737	53822	52588	65531	73390	83693	113117	136152	136333	180059	208972
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	2748	10404	10512	10524	10500	10500	10500	10512
TOTAL(Canada)	0	0	0	2748	10404	10512	10524	10500	10500	10500	10512
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[b]	34737	53822	52588	68279	83794	94205	123641	146652	146833	190559	219484
ASCC	23	23	23	23	23	23	23	23	23	23	23

[a] Includes diesel generating units.

[b] Florida does not differentiate between Firm and Interruptible natural gas. All projected natural gas requirements are reported as Interruptible.

Table 71

Interruptible Natural Gas Requirements - Combined Cycle - 1000 MCF

	Actual	Projected									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States											
ECAR	2020	2020	2020	2020	2770	3220	5000	3730	4060	4630	4710
ERCOT	1586	6688	2956	2008	2258	2352	2323	2665	2750	6745	11775
MAAC	4246	5170	5310	4440	3822	5429	9540	12418	16468	22644	24287
MAIN	0	0	0	0	0	0	0	0	0	0	0
Cmnwlth Edison	0	0	0	0	0	0	0	0	0	0	0
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	0	0	0	0	0	0	0	0	0	0
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	0	0	0	0	0	0	0	0	0	0	0
NPCC-US	8587	7025	6972	6982	7004	7057	7110	7174	7271	7388	7548
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	8587	7025	6972	6982	7004	7057	7110	7174	7271	7388	7548
SERC[a]	20128	29341	29992	63912	67374	68033	131584	131981	132813	134551	134579
Florida[a]	20128	29341	29992	63912	63914	63917	127093	127114	126915	127832	127860
Southern	0	0	0	0	3460	4116	4491	4867	5898	6719	6719
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SPP	604	480	494	516	543	1600	2102	3931	4359	10286	54959
Southeast	0	0	0	0	0	0	0	0	0	0	0
West Central	0	0	0	0	0	0	0	0	0	4576	47652
Northern	604	480	494	516	543	1600	2102	3931	4359	5710	7307
WSCC-US	7322	21988	22074	23822	23839	35292	47616	49273	66786	72997	83867
NW Power Pool	7322	21002	21071	22785	22785	22785	22924	22785	29110	35287	35461
Rocky Mtn	0	0	0	0	0	0	0	0	0	0	0
Ariz-N. Mex	0	0	0	0	0	0	0	0	0	0	0
Calif-So. Nev	0	986	1003	1037	1054	12507	24692	26488	37676	37710	48406
TOTAL(U.S.)[a]	44493	72712	69818	103700	107610	122983	205275	211172	234507	259241	321725
Canada											
MAPP-CAN	0	0	0	0	0	0	0	0	0	0	0
NPCC-CAN	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
WSCC-CAN	0	0	0	0	0	0	0	0	0	0	0
TOTAL(Canada)	0	0	0	0	0	0	0	0	0	0	0
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total[a]	44493	72712	69818	103700	107610	122983	205275	211172	234507	259241	321725
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Florida does not differentiate between Firm and Interruptible natural gas. All projected natural gas requirements are reported as Interruptible.

Generating Unit Additions and Retirements

Projections 1991-2000

Utilities in the United States plan to add 89,300 MW of new generating capacity (both utility and non-utility owned) between January 1, 1991 and December 31, 2000 and retire 4,100 MW of existing capacity. Utilities in Canada are projecting additions of 23,000 MW and retirements of 500 MW.

The codes and abbreviations used in Tables 72-81 are explained in Appendix A. The numbered notes appear on pages 118-119.

Figure 6

Construction Status of Generating Unit Additions (Thousands of MW)

	United States	Canada
Coal	15.1	1.9
Not Yet Under Construction[b]	9.0	0.4
Under Construction	6.1	1.5
Nuclear[a]	5.9	2.6
Not Yet Under Construction[b]	0.0	0.0
Under Construction	5.9	2.6
Hydro	1.1	12.7
Not Yet Under Construction[b]	0.8	7.3
Under Construction	0.3	5.4
Oil/Gas	34.2	2.3
Not Yet Under Construction[b]	33.0	1.9
Under Construction	1.2	0.4
Pumped Storage	2.5	0.0
Not Yet Under Construction[b]	0.2	0.0
Under Construction	2.3	0.0
Other (Utility)[c]	12.8	1.1
Not Yet Under Construction[b]	12.7	1.1
Under Construction	0.1	0.0
Total (Utility)	71.6	20.6
Not Yet Under Construction[b]	55.7	10.7
Under Construction	15.9	9.9
Non-Utility Generators	17.7	2.4
Total (All Additions)	89.3	23.0
Retirements	4.1	0.5

[a] Perry 2, WNP 1, and WNP 3 are in some stage of construction but are not included.

[b] Includes utility units planned but not utility authorized, units with regulatory approval pending, and units with regulatory approval received but not yet under construction.

[c] Includes utility capacity powered by geothermal, wind, solar, wood, refuse, and similar energy sources and capacity of unspecified fuel type.

Coal-Fired Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Joint	Notes
1991	3	SERC	SOU	AL	ALAP	MILLER 4	670	ST	BIT	V	U		
1991	3	WSCC	NWP	WA	TCL	STEAM PLANT NO. 2	38	ZZ	BIT	V	U		
1991	4	MAIN	WUM	WI	MPU	MANITOWOC 5	25	ST	BIT	P	U		
1991	5	MAIN	WUM	WI	MPU	BOILER ADDITION	13	ST	BIT	U	U		
1991	5	MAPP		MN	NSP	CYPRUS-NSP 1	40	ST	COL	V	U		
1991	6	ECAR		OH	CG&E	W.H. Zimmer 1	1,300	ST	COL	V	U	J	1
1991	6	ERCOT		TX	TNMP	TNP ONE UNIT 2	148	ST	LIG	V	U		
1991	6	MAAC		MD	BCCO	Brandon Shores 2	642	ST	BIT	V	U		
1991	6	MAIN	WUM	WI	WPS	COLUMBIA 2 UPGRADE	6	ST	COL	P	U		
1991	10	NPCC	NS	NS	NSPC	TRENTON 6	150	ST	BIT	U	U		
1991	10	WSCC		AB	EP	GENESEE 1	406	ST	SUB	V	U		
SUBTOTAL							3,438						
1992	6	ERCOT		TX	CPSA	J. K. SPRUCE #1	498	ST	SUB	V	U		
1992	7	MAPP		SA	SASK	SHAND 1	280	ST	LIG	V	U		
1992	7	NPCC	NS	NS	NSPC	GLACE BAY 2	24	ST	BIT	U	U		
SUBTOTAL							802						
1993	10	NPCC	NS	NS	NSPC	PT. ACONI 1	165	ST	BIT	U	U		
1993	11	NPCC	NB	NB	NBPO	Belledune 2	443	ST	COL	U	U		
SUBTOTAL							608						
1994	6	MAIN	SCI	IL	CWLP	LAKESIDE 4	20	CA	COL	T	U		8
1994	6	MAIN	SCI	IL	CWLP	LAKESIDE GT1	36	CT	COL	T	U		8
1994	12	SERC	VAC	VA	VIEP	CLOVER 1	393	ST	COL	T	U	J	41
SUBTOTAL							449						
1995	1	NPCC	NE	MA	TMLP	CONSTELLATION	150	ST	COL	P	U		
1995	4	ERCOT		TX	TUEC	TWIN OAK # 1	750	ST	LIG	U	U		
1995	4	WSCC		MX	CFE	ENSENADA 1	325	ST	SUB	L	U		
1995	5	SERC	VAC	SC	SOCA	CROSS STEAM #1	520	ST	BIT	U	U		
1995	12	SERC	VAC	VA	VIEP	CLOVER 2	393	ST	COL	T	U	J	41
SUBTOTAL							2,138						
1996	4	ERCOT		TX	TUEC	TWIN OAK # 2	750	ST	LIG	U	U		
1996	5	SERC	VAC	SC	SOCG	UNDETERMINED 4	350	ST	COL	P	U		
1996	10	MAPP		SA	SASK	FUTURE FOSSIL 1	270	ST	LIG	P	U		
SUBTOTAL							1,370						
1997	1	SERC	FL	FL	ORLA	STANTON ENERGY CENTER 2	436	ST	BIT	P	U	J	29
1997	4	WSCC		MX	CFE	ENSENADA 2	325	ST	SUB	P	U		
1997	6	MAIN	WUM	WI	WPS	COGENERATION	46	ST	COL	P	U		
1997	6	SERC	VAC	VA	VIEP	1997 PC	395	ST	COL	P	U		
1997	6	WSCC	CNV	NV	NEVP	ALLEN 1	125	ST	BIT	P	U		
SUBTOTAL							1,327						
1998	1	SERC	FL	FL	FLPL	INTEG. COAL GASIFICATION CC 1	454	IG	BIT	P	U		
1998	1	SERC	FL	FL	FLPL	INTEG. COAL GASIFICATION CC 2	453	IG	BIT	P	U		
1998	3	SERC	SOU	AL	ALEC	FOSSIL 1	125	ST	LIG	P	U		
1998	5	MAAC		UN	DPLC	Unidentified COAL	300	ST	BIT	P	U		
1998	5	MAIN	WUM	WI	WPL	BASELOAD	200	ST	COL	P	U		
1998	10	NPCC	NS	NS	NSPC	PT. ACONI 2	165	ST	BIT	P	U		
1998	12	MAIN	WUM	WI	MPU	MANITOWOC 8	60	ST	BIT	P	U		
SUBTOTAL							1,757						
1999	4	ERCOT		TX	TUEC	FOREST GROVE # 1	750	ST	LIG	U	U		

Table 72 (cont.)

Coal-Fired Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective								Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
1999	6	MAIN	WUM	WI	WPPI	FOSSIL FUEL TURBINE	100	ST	SUB	P	U		
1999	6	WSCC	CNV	NV	NEVP	ALLEN 2	125	ST	BIT	P	U		
SUBTOTAL							975						
2000	1	ERCOT		TX	HL&P	MALAKOFF #1	645	ST	LIG	T	U		
2000	1	SERC	FL	FL	FLPL	INTEG. COAL GASIFICATION CC 1	454	IG	BIT	P	U		
2000	1	SERC	FL	FL	FLPL	INTEG. COAL GASIFICATION CC 2	453	IG	BIT	P	U		
2000	5	ECAR		MI	CP	CP-Coal 1	675	ST	COL	P	U		
2000	5	MAAC		UN	GPUS	Coal 1	200	ST	COL	P	U		
2000	5	SPP	N	MO	STJO	PLANNED FACILITY	66	ST	SUB	P	U		
2000	6	ERCOT		TX	CPSA	FUTURE COAL	500	ST	SUB	P	U		
2000	6	MAIN	WUM	WI	WPS	COGENERATION	46	ST	COL	P	U		
2000	6	SERC	VAC	UN	VIEP	UNDESIGNATED PC (2)	790	ST	COL	P	U		42
2000	6	SPP	N	MO	KACP	IATAN 2	250	ST	SUB	P	U		44
2000	6	SPP	N	MO	ASEC	UNDETERMINED	630	ST	SUB	P	U		
2000	6	WSCC	CNV	NV	NEVP	ALLEN 3	125	ST	BIT	P	U		
SUBTOTAL							4,834						
TOTAL							17,698						

Nuclear Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Name	Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Joint	Notes
1991	4	NPCC	ONT	ON	ONHY	DARLINGTON 1	881	CD	UR	V	U		
SUBTOTAL							881						
1992	3	SERC	TVA	TN	TEVA	WATTS BAR NO. 1	1,170	NP	UR	V	U		
1992	6	NPCC	ONT	ON	ONHY	DARLINGTON 3	881	CD	UR	V	U		
SUBTOTAL							2,051						
1993	3	NPCC	ONT	ON	ONHY	DARLINGTON 4	881	CD	UR	V	U		
1993	7	ERCOT		TX	TUEC	COMANCHE PEAK # 2	1,150	NP	UR	V	U		
SUBTOTAL							2,031						
1995	10	SERC	TVA	TN	TEVA	WATTS BAR NO. 2	1,170	NP	UR	V	U		
SUBTOTAL							1,170						
1997	10	SERC	TVA	AL	TEVA	BELLEFONTE NO. 1	1,212	NP	UR	V	U		
SUBTOTAL							1,212						
1999	10	SERC	TVA	AL	TEVA	BELLEFONTE NO. 2	1,212	NP	UR	V	U		
SUBTOTAL							1,212						
2000	12	WSCC	NWP	WA	BPA	WNP 1	0	NP	UR	V	U		46
2000	12	WSCC	NWP	WA	BPA	WNP 3	0	NP	UR	V	U		46
SUBTOTAL							0						
TOTAL							8,557						
UNDR	0	ECAR		OH	CEC	Perry 2	1,185	NB	UR	V	U	J	4

Table 74

Hydro Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name		Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Joint	Notes
1991	3	WSCC	RMP	WY	USGP	SHOSHONE (1)		3	HY	WAT	V	U		
1991	4	WSCC	RMP	WY	USGP	SHOSHONE (3)		18	HY	WAT	V	U		
1991	6	WSCC	NWP	UT	UAMP	PINEVIEW		2	HY	WAT	U	U		
1991	7	MAPP		MB	MH	LIMESTONE	5	133	HY	WAT	U	U		
1991	9	ASCC		AK	AEA	BRADLEY LAKE		108	HY	WAT	V	U		
1991	10	MAPP		MB	MH	LIMESTONE	6	133	HY	WAT	U	U		
1991	10	NPCC	QUE	QB	HYQB	LG 2A P.A.	1	316	HY	WAT	V	U		
1991	10	WSCC	RMP	CO	USUC	MCPHEE POWER PLANT		1	HY	WAT	V	U		
1991	11	NPCC	QUE	QB	HYQB	LG 2A P.A.	2	316	HY	WAT	V	U		
1991	12	MAPP		MB	MH	LIMESTONE	7	133	HY	WAT	U	U		
1991	12	NPCC	QUE	QB	HYQB	Hart Jaune	1-2-3	48	HY	WAT	U	U		
1991	12	NPCC	QUE	QB	HYQB	LG 2A P.A.	3	316	HY	WAT	V	U		
SUBTOTAL								1,527						
1992	1	WSCC	CNV	CA	CDWR	DEVIL CANYON 3		80	HY	WAT	V	U		
1992	1	WSCC	CNV	CA	CDWR	DEVIL CANYON 4		80	HY	WAT	V	U		
1992	4	WSCC	NWP	WA	WWPC	MONROE STREET (1)		15	HY	WAT	U	U		
1992	5	MAPP		MB	MH	LIMESTONE	8	133	HY	WAT	U	U		
1992	5	WSCC	AZN	AZ	USLC	HEADGATE (3)		22	HY	WAT	V	U		
1992	5	WSCC	NWP	WA	PSPL	WHITE RIVER FLUME		14	HY	WAT	L	U		
1992	6	NPCC	QUE	QB	HYQB	LG 2A P.A.	4	316	HY	WAT	V	U		
1992	8	MAPP		MB	MH	LIMESTONE	9	133	HY	WAT	U	U		
1992	9	NPCC	QUE	QB	HYQB	LG 2A P.A.	5	316	HY	WAT	V	U		
1992	9	WSCC	RMP	CO	USUC	RIDGEWAY POWER PLANT		4	HY	WAT	T	U		
1992	10	WSCC	NWP	UT	UAMP	EAST CANYON 1 & 2		2	HY	WAT	L	U		
1992	10	WSCC	NWP	ID	IPC	MILNER HYDRO		0	HY	WAT	U	U		
1992	11	MAPP		MB	MH	LIMESTONE	10	133	HY	WAT	U	U		
1992	12	NPCC	QUE	QB	HYQB	LG 2A P.A.	6	316	HY	WAT	V	U		
SUBTOTAL								1,564						
1993	1	NPCC	NE	ME	BHE	MILFORD		2	HY	WAT	P	U		
1993	1	NPCC	ONT	ON	ONHY	LAKE GIBSON 1		5	HY	WAT	P	U		
1993	1	WSCC	NWP	WA	WWPC	NINE MILE (2)		2	HY	WAT	P	U		
1993	4	WSCC	RMP	CO	USUC	TOWAOC		11	HY	WAT	U	U		
1993	5	ECAR		OH	HAMI	Hydro		5	HY	WAT	P	U		
1993	10	WSCC	CNV	CA	MWD	ETIWANDA (2)		40	HY	WAT	U	U		
1993	11	NPCC	NE	VT	VTGP	FAIRFAX FALLS		3	HY	WAT	P	U		
1993	12	NPCC	QUE	QB	HYQB	Brisay	1-2	460	HY	WAT	U	U		
1993	12	WSCC	NWP	WA	PSPL	THUNDER CREEK		6	HY	WAT	L	U		
SUBTOTAL								534						
1994	1	WSCC	CNV	CA	SNCL	GRIZZLY		20	HY	WAT	L	U		
1994	1	WSCC	NWP	WA	BPA	COWLITZ FALLS		37	HY	WAT	T	U		
1994	1	WSCC	NWP	ID	IPC	SWAN FALLS REBUILD		5	HY	WAT	T	U		
1994	1	WSCC	NWP	WA	TCL	WYNOCHEE 1		0	HY	WAT	T	U		
1994	2	WSCC		MX	CFE	TECATE UNIT 1		30	HY	WAT	T	U		
1994	2	WSCC	CNV	CA	CDWR	MOJAVE SIPHON 1		11	HY	WAT	U	U		
1994	3	SPP	SE	AR	AREC	HS 9 UNIT #1		6	HY	WAT	T	U		
1994	3	SPP	SE	AR	AREC	HS 9 UNIT #2		6	HY	WAT	T	U		
1994	3	SPP	SE	AR	AREC	HS 9 UNIT #3		5	HY	WAT	T	U		
1994	5	WSCC		MX	CFE	TECATE UNIT 2		30	HY	WAT	T	U		
1994	5	WSCC	CNV	CA	CDWR	MOJAVE SIPHON 2		11	HY	WAT	U	U		
1994	8	WSCC	CNV	CA	CDWR	MOJAVE SIPHON 3		11	HY	WAT	U	U		
1994	10	WSCC	NWP	WA	PSPL	NOOKSACK FALLS		8	HY	WAT	L	U		
1994	11	NPCC	NE	VT	NEES	RP VERNON		20	HY	WAT	L	U		
1994	12	NPCC	QUE	QB	HYQB	Laforge 1	1-6	829	HY	WAT	U	U		
1994	12	NPCC	QUE	QB	HYQB	LG 1	1-6	684	HY	WAT	U	U		
SUBTOTAL								1,713						
1995	5	NPCC	ONT	ON	ONHY	LITTLE LONG EXTN. 1		51	HY	WAT	P	U		
1995	6	WSCC	NWP	OR	EWEB	BLUE RIVER (1)		4	HY	WAT	P	U		
1995	7	WSCC	NWP	ID	USPN	MINIDOKA 8-9		20	HY	WAT	P	U		
1995	9	NPCC	ONT	ON	ONHY	HARMON EXTN. 1		74	HY	WAT	P	U		

Hydro Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Joint	Notes
1995	9	WSCC	NWP	WA	SCL	SOUTH FORK TOLT	15	HY	WAT	T	U		
1995	10	NPCC	ONT	ON	ONHY	SMOKY FALLS REDEV. 1	61	HY	WAT	P	U		
1995	10	WSCC	NWP	ID	IPC	TWIN FALLS EXPANSION	0	HY	WAT	T	U		
1995	12	NPCC	NY	NY	NIMP	HUDSON FALLS	36	HY	WAT	L	U		
1995	12	NPCC	NY	NY	NIMP	SOUTH GLENS FALLS	14	HY	WAT	P	U		
1995	12	NPCC	QUE	QB	HYQB	Laforge 2 1-2	270	HY	WAT	P	U		
1995	12	NPCC	QUE	QB	HYQB	LG 1 1-6	684	HY	WAT	U	U		
SUBTOTAL							1,229						
1996	1	NPCC	NE	ME	BHE	VEAZIE	5	HY	WAT	P	U		
1996	1	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 96	1	HY	WAT	P	U		
1996	1	WSCC	NWP	WA	TCL	RUTH CREEK	0	HY	WAT	T	U		
1996	1	WSCC	NWP	WA	TCL	SWAMP CREEK	0	HY	WAT	T	U		
1996	2	NPCC	ONT	ON	ONHY	KIPLING EXTN. 1	66	HY	WAT	P	U		
1996	2	NPCC	ONT	ON	ONHY	SMOKY FALLS REDEV. 2	61	HY	WAT	P	U		
1996	5	NPCC	ONT	ON	ONHY	SMOKY FALLS REDEV. 3	60	HY	WAT	P	U		
1996	6	NPCC	NE	VT	NEES	RP BELLOWS FALLS	6	HY	WAT	P	U		
1996	6	SPP	WC	OK	GRRD	FT. GIBSON 5	22	HY	WAT	P	U		
1996	6	SPP	WC	OK	GRRD	FT. GIBSON 6	22	HY	WAT	P	U		
1996	12	NPCC	QUE	QB	HYQB	Eastmain 1 1-3	465	HY	WAT	P	U		
1996	12	NPCC	QUE	QB	HYQB	Manic 3 A 1-2	620	HY	WAT	P	U		
SUBTOTAL							1,328						
1997	1	NPCC	NY	NY	NIMP	OSWEGO FALLS WEST	6	HY	WAT	P	U		
1997	1	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 97	109	HY	WAT	P	U		
1997	6	NPCC	NY	NY	POAS	NIAGARA FALLS	330	HY	WAT	L	U		
1997	6	WSCC	NWP	WA	TCL	BARRIER 1-2	0	HY	WAT	L	U		
1997	6	WSCC	NWP	WA	TCL	ELKHORN 1-2	0	HY	WAT	L	U		
1997	12	NPCC	QUE	QB	HYQB	Manic 2A 1-2	363	HY	WAT	P	U		
SUBTOTAL							808						
1998	1	WSCC	CNV	CA	PG&E	UNID. PG&E HYDRO 98	17	HY	WAT	P	U		
1998	1	WSCC	CNV	CA	PG&E	UNID. PG&E SMALL HYDRO 98	2	HY	WAT	P	U		
1998	1	WSCC	NWP	WA	TCL	GLACIER CREEK	0	HY	WAT	L	U		
1998	1	WSCC	NWP	WA	TCL	WELLS CREEK	0	HY	WAT	L	U		
1998	6	MAIN	WUM	WI	WPS	HYDRO	2	HY	WAT	P	U		
1998	7	NPCC	ONT	ON	ONHY	LITTLE JACKFISH 1	65	HY	WAT	P	U		
1998	7	NPCC	ONT	ON	ONHY	NIAGARA RIVER 1	307	HY	WAT	P	U		
1998	7	WSCC	CNV	CA	RDNG	LAKE REDDING	8	HY	WAT	L	U		
1998	9	NPCC	ONT	ON	ONHY	NIAGARA RIVER 2	307	HY	WAT	P	U		
1998	11	NPCC	ONT	ON	ONHY	LITTLE JACKFISH 2	64	HY	WAT	P	U		
1998	11	NPCC	ONT	ON	ONHY	NIAGARA RIVER 3	307	HY	WAT	P	U		
1998	12	NPCC	QUE	QB	HYQB	Gr. Baleine GB-1 1-3	1,177	HY	WAT	P	U		
SUBTOTAL							2,256						
1999	1	NPCC	NE	ME	BHE	BASIN MILLS	27	HY	WAT	P	U		
1999	7	WSCC	CNV	CA	RDNG	LAKE RED BLUFF	4	HY	WAT	L	U		
1999	12	NPCC	QUE	QB	HYQB	Gr. Baleine GB-1 4-5	785	HY	WAT	P	U		
SUBTOTAL							816						
2000	10	MAPP		MB	MH	CONAWAPA 1	130	HY	WAT	T	U		
2000	11	MAPP		MB	MH	CONAWAPA 2	130	HY	WAT	T	U		
2000	12	NPCC	QUE	QB	HYQB	Gr. Baleine GB-2 1-3	539	HY	WAT	P	U		
2000	12	NPCC	QUE	QB	HYQB	Gr. Baleine GB-2 1-3	562	HY	WAT	P	U		
2000	12	NPCC	QUE	QB	HYQB	Ste Marguerite	796	HY	WAT	P	U		
SUBTOTAL							2,157						
TOTAL							13,931						

Table 75

Pumped Storage Generating Unit Additions
(Januaty 1, 1991 - December 31, 2000)

Effective								Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
1991	9	SERC	SOU	GA	SEPA	RUSSELL 5	75	PS	WAT	U	U		
1991	12	SERC	VAC	SC	DUPC	BADCREEK 1	266	PS	WAT	V	U		
1991	12	SERC	VAC	SC	DUPC	BADCREEK 2	266	PS	WAT	V	U		
1991	12	SERC	VAC	GA	SEPA	RUSSELL #6	75	PS	WAT	U	U		
SUBTOTAL							682						
1992	3	SERC	SOU	GA	SEPA	RUSSELL 7	75	PS	WAT	U	U		
1992	6	SERC	VAC	SC	DUPC	BADCREEK 3	266	PS	WAT	V	U		
1992	6	SERC	VAC	SC	DUPC	BADCREEK 4	266	PS	WAT	V	U		
1992	6	SERC	VAC	GA	SEPA	RUSSELL #8	75	PS	WAT	U	U		
SUBTOTAL							682						
1994	2	WSCC	AZN	AZ	USLC	WADDELL (4)	45	PS	WAT	U	U		
1994	4	WSCC	RMP	CO	CSU	STANLEY CANYON PUMP HYDRO	64	PS	WAT	T	U		
SUBTOTAL							109						
1995	3	SERC	SOU	GA	GEPC	ROCKY MTN 1-3	848	PS	WAT	U	U		
1995	5	WSCC	CNV	CA	RDNG	SPRING CREEK PS	50	PS	WAT	L	U		
SUBTOTAL							898						
1998	11	MAPP		MN	SMMP	MISSISSIPPI VALLEY 1	100	PS	WAT	P	U		
SUBTOTAL							100						
TOTAL							2,471						

Table 76

Oil-Fired Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name		Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Joint	Notes
1991	4	SERC	FL	FL	KEYW	STOCK ISLAND DIESEL 1		10	IC	FO2	V	U		
1991	4	SERC	FL	FL	KEYW	STOCK ISLAND DIESEL 2		10	IC	FO2	V	U		
1991	4	WSCC		MX	CFE	ROSARITO II #1		150	ST	FO6	V	U		
1991	5	MAAC		DE	DPLC	Dover		35	GT	FO2	V	U		
1991	6	MAPP		IA	IPW	LIME CREEK	1	35	GT	FO2	U	U		
1991	6	MAPP		IA	IPW	LIME CREEK	2	35	GT	FO2	U	U		
1991	7	WSCC		MX	CFE	ROSARITO II #2		150	ST	FO6	V	U		
1991	11	NPCC	NB	NB	NBPO	Millbank 1		84	GT	FO2	V	U		
1991	11	NPCC	NB	NB	NBPO	Millbank 2		84	GT	FO2	V	U		
1991	11	NPCC	NB	NB	NBPO	Millbank 3		84	GT	FO2	V	U		
1991	11	NPCC	NB	NB	NBPO	Millbank 4		84	GT	FO2	V	U		
1991	11	NPCC	NB	NB	NBPO	Ste Rose 1		84	GT	FO2	V	U		
SUBTOTAL								845						
1992	1	NPCC	NE	CT	VTGP	FLORENCE GT		8	GT	FO2	T	U		
1992	11	SERC	FL	FL	FLPC	DEBARY P7-10		280	GT	FO2	P	U		
1992	12	NPCC	QUE	QB	HYQB	Gas turbine		448	GT	FO2	P	U		
SUBTOTAL								736						
1993	0	ASCC		AK	SES	SEWARD 1		3	IC	FO2	P	U		
1993	0	ASCC		AK	SES	SEWARD 2		3	IC	FO2	P	U		
1993	1	SERC	VAC	SC	SOCA	UNDESIGNATED CAPACITY		250	GT	FO2	P	U		40
1993	5	MAAC		MD	DPLC	Easton Diesels		13	IC	FO2	P	U		
1993	11	SERC	FL	FL	FLPC	COMBUSTION TURBINE		280	GT	FO2	P	U		
1993	12	NPCC	QUE	QB	HYQB	Gas turbine		348	GT	FO2	P	U		
SUBTOTAL								897						
1994	4	ECAR		UN	KUC	Unknown 1		75	GT	FO2	P	U		
1994	6	SERC	VAC	NC	DUPC	LINCOLN COUNTY		432	GT	FO2	L	U		
1994	6	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 1		70	GT	FO2	P	U		
1994	12	SERC	VAC	NC	DUPC	LINCOLN COUNTY		432	GT	FO2	L	U		
SUBTOTAL								1,009						
1995	4	ECAR		UN	KUC	Unknown 2		75	GT	FO2	P	U		
1995	4	ECAR		UN	KUC	Unknown 3		75	GT	FO2	P	U		
1995	4	ECAR		UN	KUC	Unknown 4		75	GT	FO2	P	U		
1995	6	SERC	VAC	NC	DUPC	LINCOLN COUNTY		288	GT	FO2	L	U		
1995	6	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 2		70	GT	FO2	P	U		
1995	11	NPCC	NB	NB	NBPO	CT/DSM 1		150	GT	FO2	P	U		24
SUBTOTAL								733						
1996	4	ECAR		UN	KUC	Unknown 5		75	GT	FO2	P	U		
1996	5	MAPP		IA	IPR	PLEASANT HILL	3	35	GT	FO2	P	U		
1996	5	MAPP		IA	IPR	PLEASANT HILL	4	35	GT	FO2	P	U		
1996	6	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 3		70	GT	FO2	P	U		
1996	6	WSCC	CNV	NV	NEVP	COMBUSTION TURBINE 4		70	GT	FO2	P	U		
1996	10	NPCC	NS	NS	NSPC	NEW SITE B 1		100	GT	FO2	P	U		
1996	12	NPCC	QUE	QB	HYQB	Gas turbine		248	GT	FO2	P	U		
SUBTOTAL								633						
1997	4	ECAR		UN	KUC	Unknown 6		75	GT	FO2	P	U		
1997	5	MAIN	EM	MO	UE	COMBUSTION TURBINE		75	GT	FO2	P	U		
1997	10	ECAR		UN	APS	Combustion Turbine 1		108	GT	FO2	P	U		
1997	11	NPCC	NB	NB	NBPO	CT 2		150	GT	FO2	P	U		
1997	11	SERC	FL	FL	FLPC	COMBUSTION TURBINE		270	GT	FO2	P	U		
SUBTOTAL								[illegible]78						
1998	4	ECAR		UN	KUC	Unknown 7		75	GT	FO2	P	U		
1998	10	ECAR		UN	APS	Combustion Turbine 2		108	GT	FO2	P	U		
SUBTOTAL								183						

Table 76 (cont.)

Oil-Fired Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Joint	Notes
1999	4	ECAR		UN	KUC	Unknown 8	75	GT	FO2	P	U		
1999	5	MAIN	EM	MO	UE	COMBUSTION TURBINE	150	GT	FO2	P	U		
1999	5	MAPP		NE	OPPD	FUTURE GT 1	80	GT	FO2	P	U		
1999	10	ECAR		UN	APS	Combustion Turbine 3	108	GT	FO2	P	U		
1999	11	NPCC	NB	NB	NBPO	CT 3	150	GT	FO2	P	U		
SUBTOTAL							563						
2000	5	MAIN	EM	MO	UE	COMBUSTION TURBINE	225	GT	FO2	P	U		
2000	10	ECAR		UN	APS	Combustion Turbine 4	108	GT	FO2	P	U		
SUBTOTAL							333						
TOTAL							6,609						

Gas-Fired Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Joint	Notes
1991	1	WSCC	CNV	CA	SDGE	COGENERATION	3	CG	NG	P	U		
1991	3	SPP	WC	OK	OKGE	COGENERATOR - CONOCO	52	ST	NG	V	U		
1991	4	NPCC	NE	MA	PMLP	WATERS RIVER 2	29	JE	NG	V	U		
1991	5	MAAC		DE	DPLC	Hay Road 3	109	CT	NG	V	U		
1991	5	MAPP		IA	ISU	GRINNEL GT 2	24	GT	NG	U	U		
1991	5	SERC	VAC	SC	SOCG	HAGOOD GT 1	93	GT	NG	V	U		
1991	6	ECAR		UN	SIGE	A.B.Brown GT 1	80	GT	NG	P	U		
1991	6	MAAC		MD	PPCO	Chalk Point Ct 3	85	GT	NG	L	U		
1991	6	MAAC		MD	PPCO	Chalk Point Ct 4	85	GT	NG	L	U		
1991	6	MAAC		MD	PPCO	Chalk Point Ct 5	108	GT	NG	L	U		
1991	6	MAAC		MD	PPCO	Chalk Point Ct 6	108	GT	NG	L	U		
1991	6	MAAC		NJ	AECO	Sherman Ave CT 1	82	GT	NG	V	U		
1991	6	MAPP		SD	NWPS	HURON 2	19	GT	NG	U	U		
1991	6	SERC	SOU	AL	ALEC	CAES 1	110	ZZ	NG	U	U		37
1991	7	WSCC	CNV	CA	SCE	ANAHEIM CT	46	GT	NG	V	U		
1991	7	WSCC	CNV	CA	SCE	COOLWATER IGCC	75	CT	NG	V	U		
SUBTOTAL							1,107						
1992	1	SERC	FL	FL	KUAM	UNKNOWN	35	GT	NG	L	U		
1992	1	WSCC	CNV	CA	SDGE	COGENERATION	2	CG	NG	P	U		
1992	5	ECAR		OH	CG&E	Woodsdale 2	77	GT	NG	L	U		
1992	5	ECAR		OH	CG&E	Woodsdale 3	77	GT	NG	L	U		
1992	5	ECAR		OH	CG&E	Woodsdale 4	77	GT	NG	L	U		
1992	5	ECAR		OH	CG&E	Woodsdale 5	78	GT	NG	L	U		
1992	5	ECAR		OH	CG&E	Woodsdale 6	77	GT	NG	L	U		
1992	5	MAPP		SD	NWPS	HURON 3	19	GT	NG	L	U		
1992	5	SERC	FL	FL	VEBM	MUNICIPAL PLANT 5	34	GT	NG	L	U		
1992	6	MAAC		MD	PPCO	CC Component 1	138	CT	NG	L	U		
1992	6	SERC	FL	FL	LALW	LARSEN 8 CT	72	GT	NG	U	U		
1992	6	SERC	VAC	VA	VIEP	CHESTERFIELD 8	141	CT	NG	V	U		
1992	6	SPP	N	MO	SPRM	JRPS GT 2	74	CT	NG	T	U		
1992	9	SERC	FL	FL	ORLA	INDIAN RIVER CT C	114	GT	NG	U	U	J	27
1992	10	SERC	FL	FL	ORLA	INDIAN RIVER CT D	114	GT	NG	U	U	J	27
SUBTOTAL							1,129						
1993	1	MAAC		UN	UGIC	Hunlock 4	35	GT	NG	L	U		
1993	1	WSCC	CNV	CA	SDGE	COGENERATION	1	CG	NG	P	U		
1993	5	ECAR		OH	CG&E	Woodsdale 1	77	GT	NG	L	U		
1993	5	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	86	GT	NG	T	U		
1993	5	MAPP		UN	ISU	FUTURE GT 1	50	GT	NG	P	U		
1993	5	SERC	VAC	SC	SOCG	UNDETERMINED 1	93	GT	NG	P	U		
1993	5	WSCC	CNV	CA	MID	GAS TURBINE	44	GT	NG	P	U		
1993	6	MAAC		MD	PPCO	CC Component 2	138	CT	NG	L	U		
1993	6	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U		
1993	6	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U		
1993	6	SERC	SOU	MS	SOMI	MOSELLE	80	CT	NG	P	U		
1993	6	WSCC	CNV	NV	NEVP	CLARK 9	90	CW	NG	T	U		
1993	9	WSCC	RMP	SD	BHPL	CT 5	30	GT	NG	P	U		
1993	10	WSCC		BC	WKPL	GAS TURBINES 1-2	116	GT	NG	L	U		
1993	10	WSCC		AB	CMH	MEDICINE HAT 11	17	GT	NG	P	U		
1993	10	WSCC		AB	CMH	MEDICINE HAT 12	17	GT	NG	P	U		
SUBTOTAL							1,099						
1994	1	NPCC	NE	MA	BECO	EDGAR ENERGY PARK	306	CC	NG	L	U		
1994	1	SERC	FL	FL	FLPL	MARTIN COMBINED CYCLE UNIT 3	385	CC	NG	P	U		
1994	1	WSCC	AZN	TX	EPE	GENERIC STATION #1	70	GT	NG	P	U		
1994	1	WSCC	CNV	CA	SDGE	COGENERATION	2	CG	NG	P	U		
1994	1	WSCC	CNV	CA	LDWP	HARBOR CC	160	CT	NG	L	U		
1994	3	SERC	SOU	AL	ALEC	MCWILLIAMS 4	100	CT	NG	P	U		38
1994	3	SERC	SOU	GA	GEPC	PEAKING	679	GT	GAS	P	U		
1994	3	SERC	SOU	GA	SEAP	PEAKING	79	GT	GAS	P	U		
1994	4	ECAR		PA	DLCO	CT 1	140	GT	NG	P	U		2
1994	4	ECAR		UN	IP&L	Undesignated 1	80	GT	NG	P	U		
1994	5	MAAC		UN	GPUS	Combustion Turbines	300	GT	NG	P	U		

Table 77 (cont.)

Gas-Fired Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Joint	Notes
1994	5	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	86	GT	NG	T	U		
1994	5	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	86	GT	NG	T	U		
1994	5	SERC	VAC	SC	SOCG	UNDETERMINED 2	93	GT	NG	P	U		
1994	6	ERCOT		TX	BEPC	UNDESIGNATED	208	GT	NG	L	U		
1994	6	MAIN	SCI	IL	CIL	HALLOCK 1	80	GT	NG	P	U		
1994	6	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U		
1994	6	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U		
1994	6	MAIN	WUM	WI	WPS	LANDFILL GAS	3	ST	GAS	P	U		
1994	6	SERC	FL	FL	JACO	NAS 1	74	CC	NG	P	U		
1994	6	SERC	VAC	SC	CAPO	DARLINGTON COUNTY	225	GT	NG	L	U		
1994	6	SPP	N	MO	KACP	COMB. TURBINE 1	105	GT	NG	P	U		
1994	6	SPP	N	KS	WINF	UNKNOWN	10	GT	NG	P	U		
1994	6	WSCC	CNV	NV	NEVP	CLARK 10	90	CW	NG	T	U		
1994	10	MAPP		SA	SASK	FUTURE PEAKING 1	42	GT	NG	P	U		
1994	10	MAPP		SA	SASK	FUTURE PEAKING 2	42	GT	NG	P	U		
SUBTOTAL							3,670						
1995	1	ERCOT		TX	HL&P	STEAM SALE PROJECT	158	CT	NG	L	U		
1995	1	SERC	FL	FL	TAEC	COMBUSTION TURBINE 1	65	GT	NG	P	U		
1995	1	SERC	FL	FL	FLPL	MARTIN COMBINED CYCLE UNIT 4	385	CC	NG	P	U		
1995	1	WSCC	CNV	CA	SDGE	COGENERATION	2	CG	NG	P	U		
1995	1	WSCC	CNV	CA	SDGE	COMBINED CYCLE 1	144	CT	NG	P	U		
1995	3	SERC	SOU	AL	ALAP	PEAKING	397	GT	NG	P	U		
1995	3	SERC	SOU	GA	GEPC	PEAKING	238	GT	GAS	P	U		
1995	3	SERC	SOU	GA	GUPC	PEAKING	79	GT	GAS	P	U		
1995	3	SERC	SOU	GA	SEAP	PEAKING	79	GT	GAS	P	U		
1995	4	ECAR		UN	PSI	Undesignated 1	130	GT	NG	P	U		
1995	4	ECAR		UN	IP&L	Undesignated 2	80	GT	NG	P	U		
1995	4	ECAR		UN	PSI	Undesignated 2	130	GT	NG	P	U		
1995	4	ECAR		UN	PSI	Undesignated 3	130	GT	NG	P	U		
1995	4	WSCC	RMP	CO	PSC	FT ST VRAIN	341	ST	NG	L	U		
1995	5	ECAR		OH	CG&E	Woodsdale 7	77	GT	NG	L	U		
1995	5	MAAC		UN	GPUS	Combustion Turbines	200	GT	NG	P	U		
1995	5	NPCC	NE	RI	NEES	RP MANCH 9,10,11	293	CC	NG	L	U		21
1995	5	SERC	VAC	SC	SOCG	UNDETERMINED 3	93	GT	NG	P	U		
1995	5	SPP	N	MO	STJO	LAKE ROAD 8	65	GT	NG	P	U		
1995	6	MAAC		MD	BCCO	Perryman 51	134	CT	NG	P	U		
1995	6	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	300	GT	NG	P	U		
1995	6	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U		
1995	6	SERC	VAC	UN	VIEP	UNDESIGNATED CT (4)	306	CT	NG	P	U		42
1995	6	SPP	N	MO	KACP	COMB. TURBINE 2	105	GT	NG	P	U		
1995	6	SPP	N	MO	EMDE	ENERGY CENTER 3	75	CA	NG	P	U		
1995	6	WSCC	NWP	WA	SCL	COMBUSTION TURBINE	70	GT	NG	P	U		
SUBTOTAL							4,151						
1996	1	SERC	FL	FL	TAEC	COMBUSTION TURBINE 2	65	GT	NG	P	U		
1996	1	SERC	FL	FL	SECI	UNKNOWN 1	75	GT	NG	P	U		
1996	1	SERC	FL	FL	SECI	UNKNOWN 2	75	GT	NG	P	U		
1996	1	WSCC	CNV	CA	SDGE	COGENERATION	1	CG	NG	P	U		
1996	1	WSCC	CNV	CA	SDGE	COMBINED CYCLE 2	144	CT	NG	P	U		
1996	3	SERC	SOU	AL	ALAP	PEAKING	318	GT	GAS	P	U		
1996	3	SERC	SOU	GA	GEPC	PEAKING	318	GT	GAS	P	U		
1996	3	SERC	SOU	GA	GUPC	PEAKING	79	GT	GAS	P	U		
1996	4	SERC	FL	FL	TALL	A. B. HOPKINS GT-3	50	GT	NG	L	U		
1996	5	ECAR		OH	CG&E	Woodsdale 8	77	GT	NG	L	U		
1996	5	ECAR		OH	CG&E	Woodsdale 9	77	GT	NG	L	U		
1996	5	ECAR		OH	CG&E	Woodsdale 10	78	GT	NG	L	U		
1996	5	ECAR		OH	CG&E	Woodsdale 11	77	GT	NG	L	U		
1996	5	MAAC		UN	GPUS	Combined Cycle - CT	264	CT	NG	P	U		
1996	5	MAAC		UN	GPUS	Combined Cycle - Steam	136	CW	NG	P	U		
1996	5	MAIN	SCI	IL	IPSP	COMBUSTION TURBINE	75	GT	NG	P	U		
1996	5	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	86	GT	NG	L	U		
1996	5	MAIN	WUM	WI	WPL	COMBUSTION TURBINE	75	GT	NG	L	U		
1996	5	SPP	N	MO	MIPU	RALPH GREEN 1	27	CW	NG	L	U		
1996	5	SPP	N	MO	MIPU	RALPH GREEN 4	72	GT	NG	L	U		
1996	6	ERCOT		TX	TMPA	UNDESIGNATED	100	GT	NG	P	U		

Gas-Fired Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective								Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
1996	6	MAAC		MD	BCCO	Perryman 52	134	CT	NG	P	U		
1996	6	MAIN	WUM	WI	MGE	COMBUSTION TURBINE	72	UN	NG	P	U		
1996	6	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	150	GT	NG	P	U		
1996	6	SERC	VAC	UN	VIEP	UNDESIGNATED CT (8)	612	CT	NG	P	U		42
1996	6	SPP	N	MO	KACP	COMB. TURBINE 3	105	GT	NG	P	U		
1996	6	SPP	N	MO	KACP	COMB. TURBINE 4	105	GT	NG	P	U		
1996	6	SPP	N	MO	KACP	COMB. TURBINE 5	105	GT	NG	P	U		
1996	6	SPP	N	MO	EMDE	UNKNOWN 96	32	GT	NG	P	U		
1996	6	SPP	WC	OK	OMPA	UNKNOWN	35	GT	NG	P	U		
1996	10	WSCC		AB	CMH	MEDICINE HAT 13	30	ST	NG	P	U		
1996	11	NPCC	NE	MA	MMWEC	STONYBROOK/CTRL MA 1	100	CC	NG	P	U		
SUBTOTAL							3,749						
1997	1	WSCC	CNV	CA	SDGE	COGENERATION	2	CG	NG	P	U		
1997	3	SERC	SOU	AL	ALAP	PEAKING	79	GT	GAS	P	U		
1997	3	SERC	SOU	GA	GEPC	PEAKING	476	GT	GAS	P	U		
1997	3	SERC	SOU	MS	MIPR	PEAKING	79	GT	GAS	P	U		
1997	4	ECAR		UN	CG&E	New GT 1	65	GT	NG	P	U		
1997	4	ECAR		UN	IP&L	Undesignated 3	80	GT	NG	P	U		
1997	4	ECAR		UN	PSI	Undesignated 4	130	GT	NG	P	U		
1997	4	ERCOT		TX	TUEC	COMBUSTION TURBINE	620	GT	NG	P	U		6
1997	4	WSCC	RMP	CO	CSU	NIXON CT 1	54	GT	NG	P	U		
1997	5	ECAR		OH	CG&E	Woodsdale 12	77	GT	NG	L	U		
1997	5	MAAC		NJ	PPCO	CC Component 3	138	CT	NG	L	U		
1997	5	MAAC		UN	GPUS	Combustion Turbines	400	GT	NG	P	U		
1997	5	MAIN	SCI	IL	IPSP	COMBUSTION TURBINE	75	GT	NG	P	U		
1997	5	MAPP		UN	ISU	FUTURE GT 2	50	GT	NG	P	U		
1997	6	MAAC		MD	BCCO	Perryman 61	134	CT	NG	P	U		
1997	6	MAIN	WUM	WI	WEP	COMBUSTION TURBINE	75	GT	NG	P	U		
1997	6	SERC	SOU	MS	SOMI	MOSELLE	80	CT	NG	P	U		
1997	6	SPP	N	MO	KACP	COMB. TURBINE 6	105	GT	NG	P	U		
1997	6	SPP	N	MO	EMDE	ENERGY CENTER 4	75	CA	NG	P	U		
1997	6	SPP	N	KS	WINF	UNKNOWN	10	GT	NG	P	U		
1997	6	WSCC	NWP	WA	SCL	FUEL CELL	9	FC	NG	P	U		
1997	7	ECAR		KY	LG&E	Cane Run 12	75	GT	NG	P	U		
1997	12	SERC	FL	FL	FOPC	H. D. KING 10	50	GT	NG	P	U		
SUBTOTAL							2,938						
1998	1	SERC	FL	FL	TAEC	COMBUSTION TURBINE 3	65	GT	NG	P	U		
1998	1	WSCC	AZN	TX	EPE	GENERIC STATION #2	70	GT	NG	P	U		
1998	1	WSCC	CNV	CA	SDGE	COGENERATION	2	CG	NG	P	U		
1998	1	WSCC	CNV	CA	SDGE	COMBINED CYCLE 3	132	CT	NG	P	U		
1998	3	SERC	SOU	AL	ALEC	CT 1	75	GT	NG	P	U		
1998	3	SERC	SOU	AL	ALEC	CT 2	75	GT	NG	P	U		
1998	3	SERC	SOU	AL	ALEC	CT 3	75	GT	NG	P	U		
1998	3	SERC	SOU	AL	ALAP	PEAKING	238	GT	GAS	P	U		
1998	3	SERC	SOU	GA	GEPC	PEAKING	318	GT	GAS	P	U		
1998	3	SERC	SOU	GA	GUPC	PEAKING	79	GT	GAS	P	U		
1998	3	SERC	SOU	GA	SEAP	PEAKING	79	GT	GAS	P	U		
1998	4	ECAR		PA	DLCO	CT 2	140	GT	NG	P	U		2
1998	4	ECAR		UN	CG&E	New GT 2	65	GT	NG	P	U		
1998	4	ECAR		UN	CG&E	New GT 3	65	GT	NG	P	U		
1998	4	ECAR		UN	CG&E	New GT 4	65	GT	NG	P	U		
1998	4	ECAR		UN	IP&L	Undesignated 4	80	GT	NG	P	U		
1998	4	ERCOT		TX	TUEC	COMBUSTION TURBINE	620	GT	NG	P	U		6
1998	5	ERCOT		TX	CPSA	GT98 #1	70	GT	NG	P	U		
1998	5	ERCOT		TX	CPSA	GT98 #2	70	GT	NG	P	U		
1998	5	MAAC		UN	GPUS	Combined Cycle - CT	132	CT	NG	P	U		
1998	5	MAAC		UN	GPUS	Combined Cycle - Steam	68	CW	NG	P	U		
1998	5	MAAC		UN	GPUS	Combustion Turbines	200	GT	NG	P	U		
1998	5	MAIN	SCI	IL	IPSP	COMBUSTION TURBINE	75	GT	NG	P	U		
1998	5	SPP	WC	OK	OKGE	UNKNOWN 98	100	GT	NG	P	U		
1998	6	MAAC		MD	BCCO	Perryman 62	134	CT	NG	P	U		
1998	6	MAIN	SCI	IL	CIL	HALLOCK 2	80	GT	NG	P	U		
1998	6	MAIN	SCI	IL	CIL	HALLOCK 3	80	GT	NG	P	U		
1998	6	MAIN	WUM	WI	MGE	COMBUSTION TURBINE	36	UN	NG	P	U		

Table 77 (cont.)

Gas-Fired Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective								Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
1998	6	MAIN	WUM	WI	WPS	COMBUSTION TURBINE	75	JE	NG	P	U		
1998	6	SERC	FL	FL	GAMW	UNKNOWN 1	35	GT	NG	P	U		
1998	6	SERC	VAC	UN	VIEP	UNDESIGNATED CT (4)	306	CT	NG	P	U		42
1998	6	SPP	N	MO	EMDE	UNKNOWN 98	32	GT	NG	P	U		
1998	6	SPP	WC	OK	KAMO	C.T. #1	100	GT	NG	P	U		
1998	6	SPP	WC	MO	KACP	COMB. TURBINE 7	105	GT	NG	P	U		
1998	6	SPP	WC	OK	OMPA	UNKNOWN	35	GT	NG	P	U		
1998	6	WSCC	AZN	AZ	APS	GENERIC CT 1-3	210	GT	NG	P	U		
1998	7	WSCC	NWP	OR	PGE	COMBINED CYCLE	139	CT	NG	P	U		
1998	11	NPCC	NE	MA	MMWEC	STONYBROOK/CTRL MA 2	100	CC	NG	P	U		
1998	12	ERCOT		TX	WETU	RIO PECOS #5	37	CW	NG	P	U		
1998	12	ERCOT		TX	WETU	RIO PECOS #5	88	CT	NG	P	U		
SUBTOTAL							4,550						
1999	1	SERC	FL	FL	TAEC	COMBUSTION TURBINE 4	65	GT	NG	P	U		
1999	1	SERC	FL	FL	SECI	UNKNOWN 4	220	CC	NG	P	U		
1999	1	WSCC	CNV	CA	SDGE	COGENERATION	1	CG	NG	P	U		
1999	3	SERC	SOU	AL	ALAP	PEAKING	159	GT	GAS	P	U		
1999	3	SERC	SOU	GA	GEPC	PEAKING	476	GT	GAS	P	U		
1999	4	ECAR		UN	CG&E	New GT 5	65	GT	NG	P	U		
1999	4	ECAR		UN	CG&E	New GT 6	65	GT	NG	P	U		
1999	4	ECAR		UN	CG&E	New GT 7	65	GT	NG	P	U		
1999	4	ECAR		UN	IP&L	Undesignated 5	80	GT	NG	P	U		
1999	4	ECAR		UN	PSI	Undesignated 5	130	GT	NG	P	U		
1999	5	ERCOT		TX	CPSA	GT99 #1	70	GT	NG	P	U		
1999	5	ERCOT		TX	CPSA	GT99 #2	70	GT	NG	P	U		
1999	5	MAAC		UN	PPCO	CC Component 4	138	CT	NG	L	U		
1999	5	MAAC		UN	GPUS	Combined Cycle - CT	264	CT	NG	P	U		
1999	5	MAAC		UN	GPUS	Combined Cycle - Steam	136	CW	NG	P	U		
1999	5	MAIN	SCI	IL	IPSP	COMBUSTION TURBINE	75	GT	NG	P	U		
1999	5	MAIN	SCI	IL	IPSP	COMBUSTION TURBINE	75	GT	NG	P	U		
1999	5	SPP	SE	TX	LBPL	PLANT 2 - REPOWER	50	GT	NG	P	U		
1999	5	SPP	WC	OK	OKGE	UNKNOWN 99	170	GT	NG	P	U		
1999	6	ERCOT		TX	TMPA	UNDESIGNATED	100	GT	NG	P	U		
1999	6	MAAC		MD	BCCO	Perryman 5	118	CA	NG	P	U		
1999	6	MAIN	SCI	IL	CWLP	LAKESIDE 5	20	CA	NG	P	U		
1999	6	MAIN	SCI	IL	CWLP	LAKESIDE GT2	36	CT	NG	P	U		
1999	6	SERC	FL	FL	GAMW	UNKNOWN 2	35	GT	NG	P	U		
1999	6	SERC	VAC	UN	VIEP	UNDESIGNATED CT (4)	306	CT	NG	P	U		42
1999	6	SPP	N	MO	KACP	COMB. TURBINE 8	105	GT	NG	P	U		
1999	6	SPP	N	MO	EMDE	UNKNOWN 99	32	GT	NG	P	U		
1999	6	SPP	SE	AR	AREC	COMBUSTION TURBINE	100	CT	NG	P	U		
1999	6	WSCC	AZN	AZ	APS	GENERIC CT 4-5	140	GT	NG	P	U		
1999	12	ERCOT		TX	WETU	COMBINED CYCLE #1	110	CT	NG	P	U		
SUBTOTAL							3,476						
2000	1	ERCOT		TX	TUEC	COMBUSTION TURBINE	272	GT	NG	P	U		6
2000	1	SERC	FL	FL	LALW	UNKNOWN	100	CC	NG	P	U		
2000	1	SERC	FL	FL	SECI	UNKNOWN 5	220	CC	NG	P	U		
2000	1	WSCC	CNV	CA	SDGE	COMBINED CYCLE 4	132	CT	NG	P	U		
2000	3	SERC	SOU	AL	ALEC	CT 4	75	GT	NG	P	U		
2000	3	SERC	SOU	GA	GEPC	PEAKING	397	GT	GAS	P	U		
2000	3	SERC	SOU	GA	GUPC	PEAKING	79	GT	GAS	P	U		
2000	3	SERC	SOU	MS	MIPR	PEAKING	159	GT	GAS	P	U		
2000	4	ECAR		UN	CG&E	New GT 8	65	GT	NG	P	U		
2000	4	ECAR		UN	KUC	Unknown 9	125	GT	NG	P	U		
2000	4	SERC	FL	FL	TALL	A. B. HOPKINS 3	238	ST	NG	P	U		
2000	4	SERC	FL	FL	TALL	SAM PURDOM GT-3	50	GT	NG	L	U		
2000	5	MAAC		UN	GPUS	Combustion Turbines	300	GT	NG	P	U		
2000	5	MAIN	SCI	IL	IPSP	COMBUSTION TURBINE	75	GT	NG	P	U		
2000	5	MAIN	SCI	IL	IPSP	COMBUSTION TURBINE	75	GT	NG	P	U		
2000	5	MAPP		UN	ISU	FUTURE GT 3	50	GT	NG	P	U		
2000	5	SERC	VAC	SC	SOCG	UNDETERMINED 5	93	GT	NG	P	U		
2000	5	SERC	VAC	SC	SOCG	UNDETERMINED 6	93	GT	NG	P	U		
2000	5	SPP	WC	OK	OKGE	UNKNOWN 2000	70	GT	NG	P	U		
2000	6	ERCOT		TX	BEPC	UNDESIGNATED	208	GT	NG	P	U		

Gas-Fired Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective								Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
2000	6	MAAC		MD	BCCO	Perryman 6	118	CA	NG	P	U		
2000	6	MAIN	WUM	WI	MGE	COMBUSTION TURBINE	72	UN	NG	P	U		
2000	6	MAIN	WUM	WI	WPPI	COMBUSTION TURBINE	36	GT	NG	P	U		
2000	6	MAIN	WUM	WI	WPPI	COMBUSTION TURBINE	36	GT	NG	P	U		
2000	6	SERC	VAC	UN	VIEP	UNDESIGNATED CT (8)	612	CT	NG	P	U		42
2000	6	SPP	N	MO	KACP	COMB. CYCLE	200	CT	NG	P	U		
2000	6	SPP	N	KS	WINF	UNKNOWN	10	GT	NG	P	U		
2000	6	SPP	N	MO	EMDE	UNKNOWN 2000	70	GT	NG	P	U		
2000	6	WSCC	AZN	AZ	APS	GENERIC CT 6	70	GT	NG	P	U		
2000	12	SPP	WC	OK	PSOK	WELEETKA 4R	51	CT	NG	P	U		45
2000	12	SPP	WC	OK	PSOK	WELEETKA 5R	51	CT	NG	P	U		45
2000	12	SPP	WC	OK	PSOK	WELEETKA 6R	51	CT	NG	P	U		45
2000	12	SPP	WC	OK	PSOK	WELEETKA SR	81	CW	NG	P	U		45
SUBTOTAL							4,334						
TOTAL							30,203						

Table 78

Other (Utility) Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective								Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
1991	1	WSCC	CNV	CA	PG&E	PVUSA 1	1	SO	SUN	V	U		
1991	7	WSCC	CNV	CA	SCE	COOLWATER IGCC	25	CW	WH	V	U		
SUBTOTAL							26						
1992	1	WSCC	CNV	CA	PG&E	PVUSA 2	1	SO	SUN	T	U		
1992	3	SERC	SOU	GA	SEAP	PEAKING RES	54	UN	UNK	P	U		
1992	3	SERC	SOU	GA	GEPC	PEAKING RES.	197	UN	UNK	P	U		
1992	5	WSCC	CNV	CA	RDNG	UNIDENTIFIED COGEN 1	19	CG	ZZ	P	U		
1992	5	WSCC	CNV	CA	RDNG	UNIDENTIFIED COGEN 2	19	CG	ZZ	P	U		
1992	6	SERC	VAC	VA	VIEP	CHESTERFIELD 8	64	CW	WH	V	U		
1992	9	SERC	FL	FL	LALW	LARSEN 8 CC	26	CC	WH	U	U		
SUBTOTAL							380						
1993	1	WSCC	CNV	CA	PG&E	PVUSA 3	1	SO	SUN	T	U		
1993	2	WSCC		MX	CFE	CERRO PRIETO IV UNIT 1	19	GE	GST	T	U		
1993	3	SERC	SOU	GA	SEAP	PEAKING RES	28	UN	UNK	P	U		
1993	3	SERC	SOU	GA	GEPC	PEAKING RES.	91	UN	UNK	P	U		
1993	5	MAAC		DE	DPLC	Hay Road 4	150	CW	WH	T	U		13
1993	5	WSCC		MX	CFE	CERRO PRIETO IV UNIT 2	19	GE	GST	T	U		
SUBTOTAL							308						
1994	1	WSCC	AZN	AZ	APS	SOLAR 1	2	SO	SUN	U	U		
1994	3	SERC	SOU	AL	ALEC	MCWILLIAMS 1	10	CT	WH	P	U		38
1994	3	SERC	SOU	AL	ALEC	MCWILLIAMS 2	10	CT	WH	P	U		38
1994	3	SERC	SOU	AL	ALEC	MCWILLIAMS 3	23	CT	WH	P	U		38
1994	4	ECAR		UN	EKPC	Unknown 1	80	UN	UNK	P	U		3
1994	4	ECAR		UN	EKPC	Unknown 2	80	UN	UNK	P	U		3
1994	6	SERC	SOU	MS	SOMI	MOSELLE	40	CT	WH	P	U		
SUBTOTAL							245						
1995	1	WSCC	CNV	CA	SDGE	COMBINED CYCLE 1	86	CW	WH	P	U		
1995	1	WSCC	CNV	CA	NCPA	UNID. GENERIC BASE	25	ZZ	UNK	P	U		
1995	4	ECAR		UN	EKPC	Unknown 3	80	UN	UNK	P	U		3
1995	4	ECAR		UN	EKPC	Unknown 4	80	UN	UNK	P	U		3
1995	4	ECAR		UN	EKPC	Unknown 5	80	UN	UNK	P	U		3
1995	5	SPP	SE	TX	LBPL	WASTE RECOVERY 1	10	ST	REF	T	U		
1995	6	ECAR		UN	DP&L	New CT 1	65	GT	UNK	P	U		
1995	6	ERCOT		TX	HL&P	UNSPECIFIED CAPACITY	400	UN	UNK	P	U		5
1995	6	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U		39
SUBTOTAL							1,076						
1996	1	WSCC	CNV	CA	SDGE	COMBINED CYCLE 2	86	CW	WH	P	U		
1996	1	WSCC	CNV	CA	LDWP	GENERIC 1996	100	ZZ	UNK	P	U		
1996	1	WSCC	CNV	CA	SMUD	UNID. BASE LOAD	350	ZZ	UNK	P	U		
1996	1	WSCC	CNV	CA	SMUD	UNIDENTIFIED PEAKING	200	ZZ	UNK	P	U		
1996	2	WSCC		MX	CFE	CERRO PRIETO IV UNIT 3	19	GE	GST	P	U		
1996	4	ECAR		UN	EKPC	Unknown 6	60	UN	UNK	P	U		3
1996	4	MAIN	CE	UN	CECO	PEAKING CAPACITY	80	UN	UNK	P	U		
1996	5	MAPP		UN	NSP	FUTURE PEAKER 1	100	UN	UNK	P	U		
1996	5	WSCC		MX	CFE	CERRO PRIETO IV UNIT 4	19	GE	GST	P	U		
1996	6	ERCOT		TX	HL&P	UNSPECIFIED CAPACITY	100	UN	UNK	P	U		5
1996	6	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U		39
SUBTOTAL							1,364						
1997	1	SERC	FL	FL	TAEC	HEAT RECOVERY STEAM GEN. 1	62	CW	WH	P	U		
1997	1	WSCC	CNV	CA	LDWP	GENERIC 1997	100	ZZ	UNK	P	U		
1997	4	MAIN	CE	UN	CECO	PEAKING CAPACITY	480	UN	UNK	P	U		
1997	5	MAAC		MD	DPLC	Easton Unidentified	15	UN	UNK	P	U		
1997	5	MAPP		UN	NSP	FUTURE PEAKER 2	100	UN	UNK	P	U		
1997	6	ECAR		UN	DP&L	New CT 2	65	GT	UNK	P	U		
1997	6	SERC	VAC	UN	CAPO	UNDESIGNATED	250	UN	UNK	P	U		39

Other (Utility) Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name		Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Joint	Notes
1997	10	WSCC		AB	TAUC	NEW GENERATION		100	ZZ	UNK	P	U		
1997	12	SERC	FL	FL	FOPC	H. D. KING 6		17	CW	UNK	P	U		
SUBTOTAL								1,189						
1998	1	SERC	FL	FL	SECI	UNKNOWN 3		70	CW	UNK	P	U		
1998	1	WSCC	AZN	AZ	APS	SOLAR 2		8	SO	SUN	P	U		
1998	1	WSCC	CNV	CA	SDGE	COMBINED CYCLE 3		92	CW	WH	P	U		
1998	1	WSCC	CNV	[illegible]	LDWP	GENERIC 1998		200	ZZ	UNK	P	U		
1998	1	WSCC	CNV	[illegible]	NCPA	UNID. GENERIC BASE		25	ZZ	UNK	P	U		
1998	4	ECAR		[illegible]	EKPC	Unknown 7		60	UN	UNK	P	U		3
1998	4	MAIN	CE	UN	CECO	PEAKING CAPACITY		480	UN	UNK	P	U		
1998	5	MAPP		UN	NSP	FUTURE PEAKER	3	100	UN	UNK	P	U		
1998	6	ERCOT		TX	HL&P	UNSPECIFIED CAPACITY		100	UN	UNK	P	U		5
1998	6	MAIN	WUM	WI	WPS	MASS BURN		4	ST	WD	P	U		
1998	6	SERC	SOU	MS	SOMI	MOSELLE		40	CT	WH	P	U		
1998	6	SERC	VAC	UN	CAPO	UNDESIGNATED		750	UN	UNK	P	U		39
1998	6	SPP	N	MO	SPRM	JRPS CW1		71	CW	WH	P	U		
1998	7	WSCC	NWP	OR	PGE	COMBINED CYCLE		71	CW	WH	P	U		
1998	10	SERC	TVA	UN	TEVA	UNDETERMINED X1		600	UN	UNK	P	U		
1998	10	WSCC		AB	TAUC	NEW GENERATION		200	ZZ	UNK	P	U		
1998	11	SERC	FL	FL	FLPC	FOSSIL		700	UN	UNK	P	U		
SUBTOTAL								3,571						
1999	1	ECAR		UN	DECO	Unknown		150	UN	UNK	P	U		
1999	1	WSCC	CNV	CA	LDWP	GENERIC 1999		100	ZZ	UNK	P	U		
1999	4	ECAR		UN	EKPC	Unknown 8		60	UN	UNK	P	U		3
1999	4	ERCOT		TX	TUEC	UNSPECIFIED		400	UN	UNK	P	U		7
1999	4	MAIN	CE	UN	CECO	PEAKING CAPACITY		400	UN	UNK	P	U		
1999	5	MAPP		UN	NSP	FUTURE PEAKER	4	100	UN	UNK	P	U		
1999	5	SPP	N	MO	MIPU	PLANT X 1		200	ST	UNK	P	U		
1999	6	ECAR		UN	DP&L	New CT 3		65	GT	UNK	P	U		
1999	6	SERC	VAC	UN	CAPO	UNDESIGNATED		250	UN	UNK	P	U		39
1999	10	SERC	TVA	UN	TEVA	UNDETERMINED X2		300	UN	UNK	P	U		
1999	10	WSCC		AB	TAUC	NEW GENERATION		300	ZZ	UNK	P	U		
SUBTOTAL								2,325						
2000	1	SERC	FL	FL	TAEC	HEAT RECOVERY STEAM GEN. 2		62	CW	WH	P	U		
2000	1	WSCC	AZN	TX	EPE	GENERIC STATION #3		80	CW	WH	P	U		
2000	1	WSCC	CNV	CA	SDGE	COMBINED CYCLE 4		92	CW	WH	P	U		
2000	1	WSCC	CNV	CA	LDWP	GENERIC 2000		100	ZZ	UNK	P	U		
2000	1	WSCC	CNV	CA	SMUD	UNID. BASE LOAD		50	ZZ	UNK	P	U		
2000	1	WSCC	CNV	CA	SMUD	UNIDENTIFIED PEAKING		150	ZZ	UNK	P	U		
2000	4	ECAR		UN	EKPC	Unknown 9		60	UN	UNK	P	U		3
2000	4	ERCOT		TX	TUEC	UNDES. COAL UNIT		650	UN	UNK	P	U		6
2000	4	ERCOT		TX	TUEC	UNSPECIFIED		100	UN	UNK	P	U		6
2000	4	MAIN	CE	UN	CECO	PEAKING CAPACITY		480	UN	UNK	P	U		
2000	5	MAPP		UN	NSP	FUTURE PEAKER	5	200	UN	UNK	P	U		
2000	6	SERC	VAC	UN	CAPO	UNDESIGNATED		250	UN	UNK	P	U		39
2000	10	WSCC		AB	TAUC	NEW GENERATION		500	ZZ	UNK	P	U		
2000	11	SERC	FL	FL	FLPC	FOSSIL		700	UN	UNK	P	U		
SUBTOTAL								3,474						
TOTAL								13,958						

Table 79

Non-Utility Generator Additions
(January 1, 1991 - December 31, 2000)

Effective										Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name		Mw	S	Type	Type	Status	U/NUG	Joint	Notes
1991	1	ECAR		MI	CP	Ada Cogen Ltd		29		UN	NG	P	ZZ		
1991	1	ECAR		IN	PSI	Non-Utility Gen. 1		5		IC	FO2	P	ZZ		
1991	1	MAAC		PA	GPUS	Ebensburg Power - NUG		50		ST	ZZ	V	ZZ		14
1991	1	MAPP		MN	OTP	POTLATCH - OTP	1	9		ST	WD	V	ZZ		
1991	1	SERC	FL	FL	FLPC	PASCO WASTE RECOVERY 1		23		ZZ	REF	P	ZZ		30
1991	1	SPP	WC	OK	OKGE	COGENERATOR - AES		300		ST	BIT	V	CG		
1991	1	WSCC	CNV	CA	SCE	BATTERY STORAGE		10		ZZ	UNK	V	ZZ		
1991	1	WSCC	CNV	CA	LDWP	NON-UTILITY COGEN.		10		CG	UNK	V	CG		
1991	1	WSCC	CNV	CA	SDGE	QF BIOGAS (1)		2		IC	ZZ	P	ZZ		43
1991	1	WSCC	CNV	CA	SDGE	QF COGENERATION		23		CG	NG	P	CG		
1991	1	WSCC	CNV	CA	PG&E	QF COGENERATION 91		167		CG	UNK	U	CG		
1991	1	WSCC	CNV	CA	PG&E	QF GEOTHERMAL 91		3		GE	GST	P	ZZ		
1991	1	WSCC	CNV	CA	SDGE	QF HYDRO		5		HY	WAT	P	ZZ		
1991	1	WSCC	CNV	CA	PG&E	QF HYDRO 91		1		HY	WAT	P	ZZ		
1991	1	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 91		33		ZZ	UNK	U	ZZ		
1991	1	WSCC	CNV	CA	PG&E	QF WIND 91		9		WM	WND	P	ZZ		
1991	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS		1		ZZ	UNK	T	ZZ		
1991	2	ECAR		MI	CP	Granger-Landfill 2		2		UN	UNK	P	ZZ		
1991	2	MAAC		PA	GPUS	Lancaster Co. RR - NUG		34		ST	REF	V	ZZ		14
1991	2	NPCC	NE	RI	NEES	PAWTUCKET POWER		61		CC	GAS	U	CG		
1991	2	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS		5		UN	GAS	V	ZZ		9
1991	2	NPCC	ONT	ON	ONHY	NUG - BROCK		21		ZZ	ZZ	V	ZZ		48
1991	2	NPCC	ONT	ON	ONHY	NUG - CENTRA 2		45		ZZ	NG	V	ZZ		25
1991	2	NPCC	ONT	ON	ONHY	NUG - KIRKLAND 2		56		ZZ	NG	V	ZZ		25
1991	3	MAAC		PA	GPUS	Cambria Cogen - NUG		80		ST	ZZ	V	ZZ		14
1991	3	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS		20		CW	NG	T	CG		9
1991	3	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS		45		CW	NG	V	CG		9
1991	3	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS		1		HY	WAT	T	ZZ		9
1991	3	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS		4		UN	GAS	V	ZZ		9
1991	3	NPCC	ONT	ON	ONHY	NUG - CAMERON		5		ZZ	WAT	V	ZZ		25
1991	3	NPCC	ONT	ON	ONHY	NUG - RAGGED		6		ZZ	WAT	V	ZZ		25
1991	3	SERC	VAC	NC	CAPO	NEW HANOVER COUNTY		4		ST	REF	V	ZZ		
1991	3	SERC	VAC	VA	VIEP	RICHMOND POWER ENTR.		210		CC	NG	P	CG		
1991	3	WSCC	NWP	WA	PSPL	SPOKANE MSW		23		CG	REF	U	CG		
1991	3	WSCC	NWP	OR	IPC	TUNNEL NO. 1		6		HY	WAT	P	ZZ		
1991	4	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS		3		UN	GAS	U	ZZ		9
1991	4	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS		4		HY	WAT	V	ZZ		9
1991	4	NPCC	NY	NY	ORRU	NON-UTILITY GENERATORS		16		CW	NG	V	CG		9
1991	4	NPCC	NY	NY	ROGE	NON-UTILITY GENERATORS		1		HY	WAT	T	ZZ		9
1991	4	SERC	FL	FL	FLPL	BROWARD COUNTY RES REC-SOUTH 1		51		ZZ	REF	P	ZZ		30
1991	5	MAAC		NJ	GPUS	Dupont - NUG		118		CC	NG	V	ZZ		14
1991	5	MAAC		NJ	PSCO	Eagle Point - NUG		160		CW	NG	U	ZZ		
1991	5	MAAC		NJ	GPUS	Intercontinental - NUG		250		CC	NG	V	ZZ		14
1991	5	NPCC	NY	NY	POAS	NON-UTILITY GENERATORS		3		CW	NG	U	CG		9
1991	5	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS		3		HY	WAT	U	ZZ		9
1991	6	MAAC		PA	PLCO	Amity Landfill - NUG		2		IC	ZZ	V	ZZ		
1991	6	MAAC		NJ	GPUS	Camden Co. RR - NUG		21		ST	REF	U	ZZ		14
1991	6	MAAC		PA	AECO	DRMI - NUG	1	75		ZZ	REF	V	ZZ		
1991	6	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS		50		CW	NG	U	CG		9
1991	6	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS		49		CW	NG	U	CG		9
1991	6	NPCC	ONT	ON	ONHY	NUG - CARMICHAEL		19		ZZ	WAT	V	ZZ		25
1991	6	SERC	VAC	WV	VIEP	NORTH BRANCH PROJECT		73		ST	COL	P	ZZ		
1991	6	WSCC	CNV	NV	NEVP	SUN-PEAK (3)		210		CG	NG	V	CG		
1991	7	NPCC	NE	CT	UI	SHELTON LANDFILL		2		ST	GAS	P	ZZ		
1991	7	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS		8		UN	ZZ	T	ZZ		9
1991	7	SERC	FL	FL	FLPL	BROWARD COUNTY RES REC-NORTH 1		45		ZZ	REF	P	ZZ		30
1991	7	WSCC	CNV	CA	SCE	NON-UTILITY BIOMASS		6		IC	UNK	P	ZZ		
1991	7	WSCC	CNV	CA	SCE	NON-UTILITY COGEN.		101		CG	UNK	P	CG		
1991	7	WSCC	CNV	CA	SCE	NON-UTILITY GEOTHERMAL		8		GE	GST	P	ZZ		
1991	7	WSCC	CNV	CA	SCE	NON-UTILITY WIND		1		WM	WND	P	ZZ		
1991	7	WSCC	CNV	CA	SCE	QF MISCELLANEOUS		11		ZZ	UNK	P	ZZ		
1991	7	WSCC	RMP	CO	PSC	GEORGETOWN HYDRO DAM		0		HY	WAT	U	ZZ		
1991	8	MAAC		NJ	AECO	Mobil - NUG	1	44		CT	NG	V	ZZ		
1991	8	NPCC	NE	ME	CMP	CARRABASSETT POWER		0		ST	WOD	V	ZZ		
1991	8	NPCC	NE	CT	NU	WASTE MGMT (NEW MILFORD)		3		GT	GAS	U	ZZ		11
1991	8	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS		98		CW	NG	U	CG		9

Non-Utility Generator Additions
(January 1, 1991 - December 31, 2000)

Effective								Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
1991	9	NPCC	NE	CT	NU	EXETER ENERGY	26	ST	OIL	U	ZZ		
1991	9	NPCC	NE	MA	BECO	NORTHEAST ENERGY ASSO 1&2	198	CC	GAS	U	CG		
1991	9	NPCC	NE	MA	CES	NORTHEAST ENERGY ASSO 1&2	46	CC	GAS	U	CG		
1991	9	NPCC	NE	MA	EUA	NORTHEAST ENERGY ASSOC.	25	CC	GAS	U	CG		
1991	9	NPCC	NE	RI	NEES	OCEAN STATE 1	232	CC	GAS	V	ZZ	J	12
1991	9	NPCC	NE	RI	NEES	OCEAN STATE 2	232	CC	GAS	V	ZZ	J	12
1991	9	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	54	CW	NG	U	CG		9
1991	9	WSCC	RMP	CO	PSC	TWIN TUNNELS HYDRO	1	HY	WAT	V	ZZ		
1991	10	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	72	CW	NG	U	CG		9
1991	11	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-100	CG	NG	E	CG		
1991	11	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	80	CW	COL	U	CG		9
1991	11	SERC	VAC	VA	VIEP	HUDDLESTON	2	CT	WD	P	ZZ		
1991	11	WSCC	NWP	ID	WWPC	POTLATCH CORP.	65	CG	WD	V	CG		
1991	12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	52	CW	COL	U	CG		9
1991	12	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	8	ZZ	UNK	P	ZZ		25
1991	12	NPCC	QUE	QB	HYQB	NUG	12	HY	WAT	P	ZZ		
1991	12	NPCC	QUE	QB	HYQB	NUG	5	ST	FO6	P	ZZ		
1991	12	NPCC	QUE	QB	HYQB	NUG	50	ST	REF	P	ZZ		
1991	12	NPCC	QUE	QB	HYQB	NUG	79	GT	NG	P	ZZ		
1991	12	SERC	VAC	VA	VIEP	WYTHE PARK PWR. #3	3	IC	FO2	P	CG		
1991	12	SERC	VAC	VA	VIEP	WYTHE PARK PWR. #4	3	IC	FO2	P	CG		
1991	12	WSCC	RMP	CO	PSC	HIGHLAND CANAL HYDRO	1	HY	WAT	T	ZZ		
1991	12	WSCC	RMP	CO	PSC	UNIV. CO COGEN	10	CG	NG	U	CG		
SUBTOTAL							3,896						
1992	1	ECAR		MI	CP	Cogen MI Assoc.	34	UN	WD	P	ZZ		
1992	1	ECAR		MI	CP	Granger-Venice PK	1	UN	UNK	P	ZZ		
1992	1	ECAR		MI	CP	Grayling Gen. Station	28	UN	WD	P	ZZ		
1992	1	ECAR		MI	CP	MCV Contract	109	CA	NG	P	ZZ		
1992	1	ECAR		IN	PSI	Non-Utility Gen. 2	5	IC	FO2	P	ZZ		
1992	1	ECAR		UN	DECO	Refuse 2	11	ST	REF	P	ZZ		
1992	1	ECAR		MI	CP	WERS Alpena	15	UN	WD	P	ZZ		
1992	1	NPCC	NE	MA	CES	HUNT ROAD LANDFILL GAS	1	IC	GAS	T	ZZ		11
1992	1	NPCC	NE	MA	BECO	L'ENERGIA	48	CC	GAS	L	CG		
1992	1	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	1	HY	WAT	T	ZZ		9
1992	1	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	45	UN	COL	T	ZZ		9
1992	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	13	ZZ	WAT	P	ZZ		25
1992	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	60	ZZ	UNK	P	ZZ		25
1992	1	SERC	FL	FL	FLPC	UNKNOWN 1992 1	50	ZZ	UNK	P	ZZ		31
1992	1	WSCC	CNV	CA	SDGE	QF COGENERATION	16	CG	NG	P	CG		
1992	1	WSCC	CNV	CA	PG&E	QF COGENERATION 92	53	CG	UNK	P	CG		
1992	1	WSCC	NWP	WA	PSPL	MARCH POINT COGEN	80	CG	NG	U	CG		
1992	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS	13	ZZ	UNK	T	ZZ		
1992	1	WSCC	NWP	WA	SHPD	SUMMIT COGEN	10	CG	WD	P	CG		
1992	1	WSCC	NWP	ID	IPC	TWIN EAGLE SMALL HYDRO	0	HY	WAT	P	ZZ		
1992	1	WSCC	RMP	CO	PSC	COAL BASIN	3	ZZ	ZZ	U	ZZ		
1992	2	MAAC		NJ	AECO	PCLP - NUG 1	116	CT	NG	U	ZZ		
1992	2	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	1	HY	WAT	T	ZZ		9
1992	2	NPCC	ONT	ON	ONHY	NUG - NIPIGON	40	ZZ	UNK	U	ZZ		25
1992	3	NPCC	NE	CT	NU	SOUTHEAST.CT REGIONAL CRRA	14	ST	REF	U	ZZ		
1992	3	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	128	CW	NG	U	CG		9
1992	3	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	139	CW	NG	T	CG		9
1992	3	SERC	VAC	VA	VIEP	DOSWELL 1	275	CC	NG	P	ZZ		
1992	3	SERC	VAC	VA	VIEP	DOSWELL 2	275	CC	NG	P	ZZ		
1992	3	SERC	VAC	VA	VIEP	ENERGY ENGINEERING	14	ST	BIO	P	ZZ		
1992	3	SERC	VAC	VA	VIEP	ULTRASYSTEMS #4	57	ST	COL	P	CG		
1992	3	WSCC	CNV	CA	SCE	LUZ SOLAR X	80	SO	SUN	U	ZZ		
1992	3	WSCC	NWP	NV	SPP	BRADYS HOT SPRINGS	6	GE	GST	P	ZZ		
1992	3	WSCC	NWP	NV	SPP	GEO. POWER PARTNERS	12	GE	GST	P	ZZ		
1992	4	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-50	CG	NG	E	CG		
1992	4	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	75	CW	NG	L	CG		9
1992	4	SERC	FL	FL	FLPC	CFR BIO-GEN CORPORATION 1	74	ZZ	WD	P	ZZ		30
1992	4	WSCC	RMP	CO	PSC	LUDVIK AND POWERNET	32	CW	WH	T	ZZ		
1992	5	MAAC		NJ	GPUS	Hunterdon Energy - NUG	25	CC	NG	L	ZZ		14
1992	5	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	386	CW	NG	T	CG		9
1992	5	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	75	CW	NG	L	CG		9

Table 79 (cont.)

Non-Utility Generator Additions
(January 1, 1991 - December 31, 2000)

Effective								Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
1992	5	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	28	CW	NG	T	CG		9
1992	5	SERC	VAC	VA	VIEP	COMMONWEALTH ATLANTIC	284	CT	NG	P	ZZ		
1992	5	SERC	VAC	VA	VIEP	ULTRASYSTEMS #1	57	ST	COL	P	CG		
1992	5	WSCC	CNV	NV	NEVP	SAGUARO	90	CG	NG	V	CG		
1992	6	MAAC		PA	GPUS	Broad Top - NUG	15	ST	ZZ	L	ZZ		14
1992	6	NPCC	NE	MA	NEES	WARE COGEN	28	ST	COL	P	CG		
1992	6	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	11	UN	ZZ	U	ZZ		9
1992	6	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	60	UN	COL	T	ZZ		9
1992	6	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	60	CW	NG	U	CG		9
1992	6	NPCC	ONT	ON	ONHY	NUG - PEEL	8	ZZ	REF	U	ZZ		25
1992	6	SERC	VAC	VA	VIEP	EMPORIA TES	3	ST	WD	P	ZZ		
1992	6	WSCC	CNV	NV	NEVP	LAS VEGAS COGEN	32	CG	NG	T	CG		
1992	6	WSCC	RMP	CO	PSC	HORSE MOUNTAIN POWER GEN	25	CG	BIT	T	CG		
1992	7	ECAR		PA	APS	Pt. Marion	2	HY	WAT	P	ZZ		
1992	7	ECAR		WV	APS	WVU	49	ST	COL	P	ZZ		
1992	7	NPCC	NE	MA	CES	DARTMOUTH POWER ASSOC.	68	CC	GAS	T	ZZ		
1992	7	NPCC	NE	MA	NEES	ENRON	81	CC	ZZ	P	CG		16
1992	7	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	243	CW	NG	U	CG		9
1992	7	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	19	UN	WD	T	ZZ		9
1992	7	SERC	VAC	VA	VIEP	COGENTRIX OF RICHMOND 1	105	ST	COL	P	CG		
1992	7	SERC	VAC	VA	VIEP	COGENTRIX OF RICHMOND 2	85	ST	COL	P	CG		
1992	7	SERC	VAC	VA	VIEP	MULTITRADE	76	ST	WD	P	ZZ		
1992	7	SERC	VAC	VA	VIEP	ULTRASYSTEMS #3	57	ST	COL	P	CG		
1992	7	WSCC	CNV	CA	SCE	NON-UTILITY COGEN.	2	CG	UNK	P	CG		
1992	7	WSCC	CNV	CA	SCE	NON-UTILITY SOLAR	60	SO	SUN	P	ZZ		
1992	7	WSCC	CNV	CA	SCE	NON-UTILITY WIND	1	WM	WND	P	ZZ		
1992	7	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	15	ZZ	UNK	P	ZZ		
1992	8	MAAC		PA	GPUS	Homer City Modular - NUG	18	ST	ZZ	L	ZZ		14
1992	8	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	17	UN	WD	T	ZZ		9
1992	8	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	62	CW	COL	T	CG		9
1992	8	SERC	VAC	VA	VIEP	CHARLES CITY CO.	3	ST	WD	P	ZZ		
1992	9	NPCC	NS	NS	NSPC	NON-UTILITY GENERATOR	20	ZZ	UNK	P	ZZ		
1992	9	SERC	VAC	VA	VIEP	MECKLENBURG	120	ST	COL	P	CG		
1992	10	MAAC		NJ	PSCO	Mercer County RRF - NUG	16	ST	REF	P	ZZ		
1992	10	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	75	CW	NG	L	CG		9
1992	10	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	80	CW	NG	T	CG		9
1992	10	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	0	HY	WAT	U	ZZ		9
1992	10	SERC	FL	FL	FLPC	SEMINOLE FERTILIZER 1	40	CG	WH	P	CG		31
1992	10	WSCC		AB	TAUC	NON-UTILITY GENERATION	42	ZZ	UNK	P	ZZ		
1992	10	WSCC	CNV	CA	RDNG	UNKNOWN PEAKING	25	CG	ZZ	P	CG		
1992	10	WSCC	RMP	CO	PSC	PUEBLO CHEMICAL	65	CG	NG	T	CG		
1992	11	ECAR		WV	APS	Grant Town	80	ST	COL	P	ZZ		
1992	11	NPCC	NE	MA	FGE	KENETECH	14	ST	WOD	L	ZZ		
1992	11	NPCC	NE	ME	CMP	NORTHEAST BEAVER 7	34	ST	WOD	U	ZZ		
1992	11	NPCC	NE	VT	VTGP	RYEGATE - DECKER ENERGY	18	ST	WOD	T	ZZ		
1992	11	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	24	UN	REF	U	ZZ		9
1992	11	WSCC	NWP	NV	SPP	GEOTHERMAL 1	11	GE	GST	P	ZZ		
1992	11	WSCC	NWP	NV	SPP	GEOTHERMAL 2	5	GE	GST	P	ZZ		
1992	11	WSCC	NWP	NV	SPP	GEOTHERMAL 3	9	GE	GST	P	ZZ		
1992	11	WSCC	RMP	CO	PSC	LAKEWOOD HYDRO	3	HY	WAT	T	ZZ		
1992	12	MAAC		PA	GPUS	Panther Creek - NUG	80	ST	ZZ	U	ZZ		14
1992	12	MAAC		NJ	GPUS	Tamal Tinton Falls - NUG	18	ST	WD	L	ZZ		14
1992	12	NPCC	NE	MA	NEES	COASTAL REVERE	85	GT	OIL	P	ZZ		
1992	12	NPCC	NE	MA	NEES	O'BRIEN COGEN V	56	CC	GAS	P	CG		
1992	12	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	28	UN	ZZ	T	ZZ		9
1992	12	NPCC	QUE	QB	HYQB	NUG	10	ST	WAT	P	ZZ		
1992	12	NPCC	QUE	QB	HYQB	NUG	109	CT	NG	P	ZZ		
1992	12	SERC	VAC	VA	VIEP	EASTERN STATE HOSP.	3	IC	NG	P	CG		
1992	12	SERC	VAC	VA	VIEP	HOLLYWOOD COGEN	3	IC	NG	P	CG		
1992	12	SERC	VAC	VA	VIEP	I-66 LANDFILL	1	IC	GAS	P	ZZ		43
1992	12	SERC	VAC	VA	VIEP	I-95 LANDFILL	3	IC	GAS	P	ZZ		43
1992	12	SERC	VAC	VA	VIEP	JOHNSON GEN SET 1	3	ST	WD	P	ZZ		
1992	12	SERC	VAC	VA	VIEP	JOHNSON GEN SET 2	3	ST	WD	P	ZZ		
1992	12	SERC	VAC	VA	VIEP	JOHNSON GEN SET 3	3	ST	WD	P	ZZ		
1992	12	SERC	VAC	VA	VIEP	RICHMOND LANDFILL	3	UN	GAS	P	CG		43
1992	12	SERC	VAC	VA	VIEP	SOUTH RIVER USED OIL	1	ST	RRO	P	ZZ		
1992	12	SERC	VAC	VA	VIEP	SOUTHSIDE VA. TNG. CTR.	3	IC	NG	P	CG		

Table 79 (cont.)

Non-Utility Generator Additions
(January 1, 1991 - December 31, 2000)

Effective								Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
1992	12	SERC	VAC	VA	VIEP	THREE MW - SONOCO	3	ST	NG	P	CG		
1992	12	SERC	VAC	VA	VIEP	WESTERN STATE HOSP.	3	IC	NG	P	CG		
1992	12	WSCC	CNV	CA	SCE	LUZ SOLAR XI	80	SO	SUN	P	ZZ		
1992	12	WSCC	RMP	CO	PSC	A.B. LATERAL	35	HY	WAT	T	ZZ		
1992	12	WSCC	RMP	CO	PSC	SHAVANO FALLS	3	HY	WAT	T	ZZ		
SUBTOTAL							5,249						
1993	1	ECAR		MI	CP	Granger-Landfill 1	2	UN	UNK	P	ZZ		
1993	1	ECAR		MI	CP	MCV Contract	108	CA	NG	P	ZZ		
1993	1	ECAR		IN	PSI	Non-Utility Gen. 3	5	IC	FO2	P	ZZ		
1993	1	NPCC	NE	CT	NU	ARS KELP POWER 1	32	ST	WOD	L	ZZ		
1993	1	NPCC	NE	CT	NU	BIO-GEN TORRINGTON	13	ST	WOD	L	ZZ		
1993	1	NPCC	NE	ME	CMP	BOISE CASCADE (RUMFORD)	25	ST	ZZ	V	CG		47
1993	1	NPCC	NE	CT	NU	FLAGG/PERKIN ELMER(CCF 2)	9	CC	ZZ	P	CG		16
1993	1	NPCC	NE	CT	NU	FLAGG/UNIROYAL (CCF 3)	24	ST	WOD	P	CG		
1993	1	NPCC	NE	MA	MMWEC	L'ENERGIA	6	CC	GAS	L	CG		
1993	1	NPCC	NE	MA	CES	MA POWER COGEN (MONSANTO)	25	CC	GAS	T	CG		
1993	1	NPCC	NE	MA	MMWEC	MASS POWER - MONSANTO	18	CC	GAS	T	CG		
1993	1	NPCC	NE	MA	NU	MASS POWER - MONSANTO	54	CC	GAS	P	CG		
1993	1	NPCC	NE	NH	NEES	N.H. WOOD ENERGY	21	ST	WOD	P	CG		
1993	1	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS	2	UN	REF	P	ZZ		9
1993	1	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	1	HY	WAT	P	ZZ		9
1993	1	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	158	CW	NG	T	CG		9
1993	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	14	ZZ	WAT	P	ZZ		25
1993	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	110	ZZ	NG	P	ZZ		25
1993	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	56	ZZ	UNK	P	ZZ		25
1993	1	SERC	FL	FL	FLPL	ENVIRONMENTAL POWER CORP 1	5	ZZ	ZZ	P	ZZ		32
1993	1	SERC	FL	FL	TAEC	HARDEE POWER STATION	75	CT	NG	P	ZZ		33
1993	1	SERC	FL	FL	TAEC	HARDEE POWER STATION	220	CC	NG	P	ZZ		33
1993	1	SERC	FL	FL	TAEC	REFUSE PLANT	8	ZZ	REF	P	ZZ		30
1993	1	SERC	FL	FL	FLPC	UNKNOWN 1993 1	10	ZZ	UNK	P	ZZ		31
1993	1	WSCC	CNV	CA	SDGE	QF COGENERATION	12	CG	NG	P	CG		
1993	1	WSCC	CNV	CA	PG&E	QF COGENERATION 93	121	CG	UNK	P	CG		
1993	1	WSCC	CNV	CA	PG&E	QF HYDRO 93	2	HY	WAT	P	ZZ		
1993	1	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 93	6	ZZ	UNK	P	ZZ		
1993	1	WSCC	NWP	WA	PSPL	ENCOGEN	160	CG	NG	P	CG		
1993	1	WSCC	NWP	ID	PEOG	ENVIRON. ENERGY CO.	8	HY	WAT	P	ZZ		
1993	1	WSCC	NWP	UT	PEOG	KAISER COGEN	45	CG	ZZ	P	CG		
1993	1	WSCC	NWP	ID	PEOG	MARSH VALLEY	2	HY	WAT	P	ZZ		
1993	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS	13	ZZ	UNK	T	ZZ		
1993	1	WSCC	RMP	CO	PSC	PEACH QUEEN POWER STAT	3	HY	WAT	T	ZZ		
1993	2	MAAC		PA	GPUS	Northampton Energy - NUG	82	ST	ZZ	L	ZZ		14
1993	2	MAAC		PA	GPUS	Scrubgrass Power - NUG	80	ST	ZZ	L	ZZ		14
1993	3	MAAC		NJ	GPUS	Consol.Nat.Gas - NUG	215	CC	NG	L	ZZ		14
1993	3	MAAC		PA	GPUS	Interpower - NUG	80	ST	ZZ	L	ZZ		14
1993	3	MAAC		NJ	PSCO	Newark Bay - NUG	92	CW	NG	L	ZZ		
1993	3	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	49	CW	NG	T	CG		9
1993	3	SERC	VAC	VA	VIEP	ULTRASYSTEMS #2	57	ST	COL	P	CG		
1993	4	NPCC	NE	CT	NU	LIBSON	15	ST	REF	P	ZZ		
1993	4	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79	CW	NG	T	CG		9
1993	4	WSCC		BC	BCHA	NW ENERGY	55	CG	WD	L	CG		
1993	4	WSCC	RMP	CO	PSC	WEST POWER 1	122	CG	NG	U	CG		
1993	5	MAAC		MD	PPCO	GEORGETOWN NUG	56	GT	NG	P	ZZ		
1993	5	MAAC		NJ	PSCO	Union County RRF - NUG	40	ST	REF	P	ZZ		
1993	5	NPCC	NY	NY	CEHG	NON-UTILITY GENERATORS	5	HY	WAT	T	ZZ		9
1993	5	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS	125	CW	NG	T	CG		9
1993	5	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79	CW	NG	T	CG		9
1993	5	NPCC	NY	NY	ROGE	NON-UTILITY GENERATORS	55	CW	NG	T	CG		9
1993	5	SERC	VAC	VA	VIEP	TURBO POWER I	100	CC	NG	P	CG		
1993	5	SERC	VAC	VA	VIEP	TURBO POWER II	100	CC	NG	P	CG		
1993	6	ECAR		OH	DP&L	Mont. County 2	4	ST	REF	P	ZZ		
1993	6	MAAC		PA	GPUS	Clarion Power - NUG	30	ST	ZZ	T	ZZ		14
1993	6	NPCC	NE	MA	CES	SEMASS EXPANSION	23	ST	REF	T	ZZ		
1993	6	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS	146	CW	NG	T	CG		9
1993	6	SERC	VAC	VA	VIEP	BRASFIELD DAM	1	HY	WAT	P	ZZ		
1993	6	SERC	VAC	VA	VIEP	COMMONWEALTH COGEN PART.	112	ST	COL	P	CG		

Table 79 (cont.)

Non-Utility Generator Additions
(January 1, 1991 - December 31, 2000)

Effective									Unit	Fuel		Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name		Mw S	Type	Type	Status	U/NUG	Joint	Notes
1993	6	WSCC	CNV	NV	NEVP	BONNEVILLE A&B		170	CG	NG	T	CG		
1993	7	MAAC		NJ	PSCO	Camden Cogen - NUG		112	CW	NG	L	ZZ		
1993	7	MAAC		PA	GPUS	Cornwall Energy - NUG		80	ST	ZZ	L	ZZ		14
1993	7	NPCC	NE	RI	NEES	RI SOLID WASTE (QUONSET PT)		17	ST	REF	P	CG		
1993	7	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS		55	CW	NG	T	CG		9
1993	7	WSCC	CNV	CA	SCE	NON-UTILITY BIOMASS		27	IC	UNK	P	ZZ		
1993	7	WSCC	CNV	CA	SCE	NON-UTILITY SOLAR		40	SO	SUN	P	ZZ		
1993	7	WSCC	CNV	CA	SCE	NON-UTILITY WIND		1	WM	WND	P	ZZ		
1993	7	WSCC	CNV	CA	SCE	QF MISCELLANEOUS		13	ZZ	UNK	P	ZZ		
1993	7	WSCC	NWP	CA	PSPL	TRANSPAC GEOTHERMAL		10	GE	GST	P	ZZ		
1993	7	WSCC	RMP	CO	PSC	SUNLAWN EASTSIDE		25	CG	BIT	T	CG		
1993	9	MAAC		UN	PSCO	Falls/W. Potts - NUG		107	ST	REF	P	ZZ		
1993	9	NPCC	NS	NS	NSPC	NON-UTILITY GENERATOR		10	ZZ	UNK	P	ZZ		
1993	9	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS		437	CW	NG	T	CG		9
1993	9	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS		14	UN	WD	T	ZZ		9
1993	9	NPCC	NY	NY	NEYE	NON-UTILITY GENERATORS		18	UN	REF	T	ZZ		9
1993	9	WSCC	CNV	CA	SDGE	QF SOLAR		40	SO	SUN	P	ZZ		
1993	10	WSCC		AB	TAUC	NON-UTILITY GENERATION		42	ZZ	UNK	P	ZZ		
1993	10	WSCC		BC	BCHA	WEST COAST		105	GT	NG	L	ZZ		
1993	11	NPCC	NE	ME	CMP	NORTHEAST BEAVER 1		31	ST	WOD	L	ZZ		
1993	11	WSCC	NWP	NV	SPP	GEOTHERMAL 4		11	GE	GST	P	ZZ		
1993	12	ERCOT		TX	HL&P	OCCIDENTAL-NUG		-225	GT	NG	E	CG		
1993	12	MAAC		PA	GPUS	Glendon Energy - NUG		12	ST	REF	L	ZZ		14
1993	12	NPCC	QUE	QB	HYQB	NUG		10	HY	WAT	P	ZZ		
1993	12	NPCC	QUE	QB	HYQB	NUG		15	ST	WD	P	ZZ		
1993	12	NPCC	QUE	QB	HYQB	NUG		30	CT	NG	P	ZZ		
SUBTOTAL								4,380						
1994	1	ECAR		MI	CP	MCV Contract		109	CA	NG	P	ZZ		
1994	1	ECAR		MI	CP	Pollard Gen.		35	UN	REF	P	ZZ		
1994	1	ECAR		UN	DECO	Refuse 3		74	ST	REF	P	ZZ		
1994	1	MAAC		NJ	AECO	VMS - NUG	1	45	CT	NG	P	ZZ		
1994	1	NPCC	NE	RI	BECO	AES NORTH ATLANTIC		81	ST	COL	L	ZZ		
1994	1	NPCC	NE	CT	NU	FLAGG/PERKIN ELMER (CCF 2)		1	CC	ZZ	P	CG		16
1994	1	NPCC	NE	MA	BECO	MA POWER (RFP #2) MONSANTO		100	CC	GAS	T	CG		
1994	1	NPCC	NE	RI	BELD	NEWBAY		6	ST	COL	L	CG		
1994	1	NPCC	NE	RI	MMWEC	NEWBAY		15	ST	COL	L	CG		
1994	1	NPCC	NE	RI	NEES	NEWBAY		40	ST	COL	L	CG		
1994	1	NPCC	NE	RI	TMLP	NEWBAY		10	ST	COL	L	CG		
1994	1	NPCC	NE	MA	NU	TAMAL-ASSONET		20	ST	WOD	P	CG		
1994	1	NPCC	NE	NH	CMP	WHEELABRATOR - EPPING		18	ST	REF	L	CG		
1994	1	NPCC	NY	NY	LOIL	NON-UTILITY GENERATORS		27	UN	REF	T	ZZ		9
1994	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.		14	ZZ	WAT	P	ZZ		25
1994	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.		110	ZZ	UNK	P	ZZ		25
1994	1	SERC	FL	FL	FLPL	AES CEDAR BAY 1		250	CG	BIT	P	CG		30
1994	1	SERC	FL	FL	FLPL	GEORGIA PACIFIC 1		15	CG	NG	P	CG		34
1994	1	SERC	FL	FL	FLPL	MERRIT SQUARE MALL 1		2	CG	NG	P	CG		34
1994	1	SERC	FL	FL	FLPC	UNKNOWN 1994 1		203	ZZ	UNK	P	ZZ		31
1994	1	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN		2	CG	UNK	P	CG		
1994	1	WSCC	CNV	CA	PG&E	QF COGENERATION 94		103	CG	UNK	P	CG		
1994	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS		13	ZZ	UNK	T	ZZ		
1994	1	WSCC	NWP	WA	PSPL	WHEELABRATOR PIERCE		23	CG	REF	P	CG		
1994	2	MAAC		NJ	GPUS	Logan Energy - NUG		100	ST	COL	L	ZZ		14
1994	3	MAAC		NJ	PSCO	Passaic County RRF - NUG		40	ST	REF	P	ZZ		
1994	4	MAAC		NJ	GPUS	Vista Energy - NUG		100	ST	COL	L	ZZ		14
1994	4	WSCC		BC	BCHA	HIGHLAND		50	HY	WAT	L	ZZ		
1994	4	WSCC	RMP	CO	PSC	BLUE HILL HYDRO		0	HY	WAT	T	ZZ		
1994	4	WSCC	RMP	CO	PSC	FT LUPTON COGEN		150	CG	NG	L	CG		
1994	5	ERCOT		TX	TUEC	NON-UTILITY GENERATOR		-350	CG	NG	E	CG		
1994	5	MAPP		MN	NSP	DAKOTA CO-NSP	1	65	ST	REF	L	ZZ		
1994	5	NPCC	NY	NY	CEHG	BIDDING CAPACITY		50	GT	FO2	P	ZZ		10
1994	5	NPCC	NY	NY	COEN	BIDDING CAPACITY		200	UN	NG	P	ZZ		10
1994	5	NPCC	NY	NY	ORRU	BIDDING CAPACITY		95	UN	NG	T	ZZ		10
1994	5	NPCC	NY	NY	ROGE	BIDDING CAPACITY		50	UN	NG	P	ZZ		10
1994	5	NPCC	NY	NY	COEN	NON-UTILITY GENERATORS		78	CW	NG	T	CG		9
1994	6	MAAC		NJ	AECO	CCLP - NUG	1	230	ST	BIT	T	ZZ		

Non-Utility Generator Additions
(January 1, 1991 - December 31, 2000)

Effective											Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Unit Type	Fuel Type	Status	U/NUG	Joint	Notes
1994	6	MAAC		NJ	PSCO	Hudson County RRF - NUG	38	ST	REF	P	ZZ		
1994	6	MAAC		NJ	AECO	KCS - NUG 1	203	ST	BIT	T	ZZ		
1994	6	MAAC		MD	PPCO	Muni. Solid Waste	50	ST	REF	P	ZZ		
1994	6	NPCC	NY	NY	POAS	NON-UTILITY GENERATORS	90	CW	NG	P	CG		9
1994	6	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 1	13	ZZ	REF	P	ZZ		35
1994	6	SERC	VAC	NC	VIEP	ROANOKE VALLEY PROJECT	150	ST	COL	P	CG		
1994	7	MAAC		NJ	GPUS	Bergen Co. RR - NUG	80	ST	REF	L	ZZ		14
1994	7	SERC	FL	FL	FLPC	GENERAL PEAT RESOURCES 1	52	ZZ	PEA	P	ZZ		30
1994	7	WSCC	CNV	CA	SCE	NON-UTILITY GEOTHERMAL	59	GE	GST	P	ZZ		
1994	7	WSCC	CNV	CA	SCE	NON-UTILITY SOLAR	30	SO	SUN	P	ZZ		
1994	7	WSCC	CNV	NV	NEVP	OXFORD	45	ZZ	ZZ	T	ZZ		
1994	7	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	12	ZZ	UNK	P	ZZ		
1994	7	WSCC	NWP	OR	PGE	MISC. RESOURCES	14	CG	NG	P	CG		
1994	9	ECAR		PA	APS	Shannopin	80	ST	COL	P	ZZ		
1994	9	NPCC	NS	NS	NSPC	NON-UTILITY GENERATOR	20	ZZ	UNK	P	ZZ		
1994	10	NPCC	NY	NY	NIMP	BIDDING CAPACITY	216	UN	NG	L	ZZ		10
1994	10	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	79	CW	NG	T	CG		9
1994	10	SERC	FL	FL	FLPC	GENERAL PEAT RESOURCES 2	52	ZZ	PEA	P	ZZ		30
1994	10	SERC	FL	FL	FLPC	PINELLAS RES. REC. NORTH 1	40	ZZ	REF	P	ZZ		30
1994	10	WSCC		AB	TAUC	NON-UTILITY GENERATION	41	ZZ	UNK	P	ZZ		
1994	11	NPCC	NE	VT	VTGP	DESTEC ENERGY (LIME ROCK)	61	CC	GAS	L	ZZ		20
1994	11	NPCC	NE	ME	CMP	NORTHEAST BEAVER 3	31	ST	WOD	L	ZZ		
1994	11	NPCC	NY	NY	NEYE	BIDDING CAPACITY	100	GT	NG	P	ZZ		10
1994	12	ERCOT		TX	HL&P	DOW CHEMICAL-NUG	-325	GT	NG	E	CG		
1994	12	NPCC	NY	NY	NIMP	NON-UTILITY GENERATORS	17	HY	WAT	L	ZZ		9
SUBTOTAL							3,422						
1995	1	ECAR		MI	CP	MCV Contract	108	CA	NG	P	ZZ		
1995	1	ECAR		IN	PSI	Non-Utility Gen. 4	30	IC	FO2	P	ZZ		
1995	1	MAAC		NJ	PSCO	Non-Utility Bids	100	UN	ZZ	P	ZZ		
1995	1	NPCC	NE	MA	EUA	AMERICAN REF FUEL	35	ST	REF	L	CG		
1995	1	NPCC	NE	ME	CMP	BOISE CASCADE (RUMFORD COGEN)	23	ST	ZZ	V	CG		47
1995	1	NPCC	NE	MA	CES	NEW BEDFORD COGEN EAST	83	ST	COL	L	CG		
1995	1	NPCC	NY	NY	LOIL	BIDDING CAPACITY	150	UN	FO2	P	ZZ		10
1995	1	NPCC	NY	NY	ORRU	BIDDING CAPACITY	100	UN	NG	L	ZZ		10
1995	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	15	ZZ	WAT	P	ZZ		25
1995	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	102	ZZ	UNK	P	ZZ		25
1995	1	SERC	FL	FL	FLPC	GENERAL PEAT RESOURCES 3	52	ZZ	PEA	P	ZZ		30
1995	1	SERC	FL	FL	FLPC	TIMBER ENERGY RES. 2	6	ZZ	WD	P	ZZ		30
1995	1	SERC	FL	FL	FLPC	UNKNOWN 1995 1	140	ZZ	UNK	P	ZZ		31
1995	1	WSCC		BC	BCHA	KEMANO 9-12	300	HY	WAT	L	ZZ		
1995	1	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	3	CG	UNK	P	CG		
1995	1	WSCC	CNV	AZ	SDGE	QF COGENERATION	25	CG	NG	P	CG		
1995	1	WSCC	CNV	CA	PG&E	QF SOLID WASTE/BIOMASS 95	15	ZZ	UNK	P	ZZ		
1995	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS	13	ZZ	UNK	T	ZZ		
1995	3	ERCOT		TX	HL&P	BAYOU COGENERATION-NUG	-270	GT	NG	E	CG		
1995	4	WSCC	RMP	CO	PSC	COLO. POWER PROJECT #2	68	CG	NG	T	CG		
1995	4	WSCC	RMP	CO	PSC	SILVER LAKE	2	HY	WAT	T	ZZ		
1995	5	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-100	CG	NG	E	CG		
1995	6	ECAR		UN	DP&L	Mont. County 3	4	ST	REF	P	ZZ		
1995	6	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 2	13	ZZ	REF	P	ZZ		35
1995	6	SERC	VAC	VA	VIEP	PARADISE CREEK PROJECT	40	ST	REF	P	ZZ		
1995	7	WSCC	CNV	CA	SCE	NON-UTILITY GEOTHERMAL	20	GE	GST	P	ZZ		
1995	7	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	10	ZZ	UNK	P	ZZ		
1995	7	WSCC	NWP	OR	PGE	MISC. RESOURCES	65	CG	NG	P	CG		
1995	10	ECAR		MD	APS	AES Cumberland	180	ST	COL	P	ZZ		
1995	10	ECAR		UN	APS	PURPA 1	130	ST	COL	P	ZZ		
1995	11	WSCC	NWP	NV	SPP	GEOTHERMAL 5	18	GE	GST	P	ZZ		
1995	12	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-77	CG	NG	E	CG		
1995	12	SERC	FL	FL	FLPL	BECHTEL INDIANTOWN 1	300	CG	BIT	P	CG		30
SUBTOTAL							1,703						
1996	1	ECAR		UN	DECO	Refuse 4	10	ST	REF	P	ZZ		
1996	1	ECAR		MI	CP	Unknown NUG 1	20	UN	UNK	L	ZZ		
1996	1	MAAC		UN	PSCO	Non-Utility Bids	150	UN	ZZ	P	ZZ		

Table 79 (cont.)

Non-Utility Generator Additions
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Unit Type	Fuel Type	Status	Ownership U/NUG	Ownership Joint	Notes
1996	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	15	ZZ	WAT	P	ZZ		25
1996	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	126	ZZ	UNK	P	ZZ		25
1996	1	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 3	13	ZZ	REF	P	ZZ		35
1996	1	SERC	FL	FL	FLPC	UNKNOWN 1996 1	75	ZZ	UNK	P	ZZ		31
1996	1	WSCC	AZN	AZ	APS	GENERIC COGEN 1	4	CG	UNK	P	CG		
1996	1	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG		
1996	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS	7	ZZ	UNK	T	ZZ		
1996	4	WSCC	RMP	CO	PSC	COLUMBINE POWER PROJ	80	ST	BIT	T	ZZ		
1996	5	MAAC		UN	DPLC	Unidentified NUG	150	UN	UNK	P	ZZ		
1996	6	WSCC	NWP	ID	SCL	ARROWROCK	15	HY	WAT	P	ZZ		
1996	7	WSCC	CNV	CA	SCE	NON-UTILITY GEOTHERMAL	5	GE	GST	P	ZZ		
1996	7	WSCC	CNV	CA	SCE	QF MISCELLANEOUS	2	ZZ	UNK	P	ZZ		
1996	7	WSCC	NWP	OR	PGE	MISC. RESOURCES	13	CG	NG	P	CG		
1996	11	NPCC	NE	ME	CMP	CAITHNESS KING	60	ST	ZZ	L	CG		47
1996	11	NPCC	NE	ME	CMP	NORTHEAST BEAVER 5	31	ST	WOD	L	ZZ		
1996	11	SERC	VAC	VA	VIEP	SEI BIRCHWOOD	198	ST	COL	P	CG		
SUBTOTAL							976						
1997	1	ECAR		IN	PSI	Non-Utility Gen. 5	15	IC	FO2	P	ZZ		
1997	1	ECAR		MI	CP	Unknown NUG 2	20	UN	UNK	L	ZZ		
1997	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	16	ZZ	WAT	P	ZZ		25
1997	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	123	ZZ	UNK	P	ZZ		25
1997	1	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 4	13	ZZ	REF	P	ZZ		35
1997	1	SERC	FL	FL	FLPC	UNKNOWN 1997 1	75	ZZ	UNK	P	ZZ		35
1997	1	WSCC	AZN	AZ	APS	GENERIC COGEN 2	4	CG	UNK	P	CG		
1997	1	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG		
1997	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS	7	ZZ	UNK	T	ZZ		
1997	5	SPP	WC	OK	OKGE	COGENERATOR - MCPC	100	GT	NG	P	CG		
SUBTOTAL							375						
1998	1	ECAR		IN	PSI	Non-Utility Gen. 6	5	IC	FO2	P	ZZ		
1998	1	ECAR		MI	CP	Unknown NUG 3	25	UN	UNK	L	ZZ		
1998	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	16	ZZ	WAT	P	ZZ		25
1998	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	128	ZZ	UNK	P	ZZ		25
1998	1	SERC	FL	FL	FLPL	BIOMASS FACILITY 1	50	ZZ	BIO	P	ZZ		35
1998	1	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 5	13	ZZ	REF	P	ZZ		35
1998	1	WSCC	AZN	AZ	APS	GENERIC COGEN 3	4	CG	UNK	P	CG		
1998	1	WSCC	AZN	AZ	APS	REFUSE 1	10	ZZ	REF	L	ZZ		
1998	1	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	3	CG	UNK	P	CG		
1998	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS	7	ZZ	UNK	T	ZZ		
1998	6	ERCOT		TX	HL&P	AES DEEPWATER-NUG	-125	ST	PC	E	ZZ		
1998	6	WSCC	NWP	WA	SCL	BIOMASS	16	CG	WD	P	CG		
1998	7	WSCC	NWP	OR	PGE	MISC. RESOURCES	14	CG	NG	P	CG		
SUBTOTAL							166						
1999	1	ECAR		IN	PSI	Non-Utility Gen. 7	5	IC	FO2	P	ZZ		
1999	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	16	ZZ	WAT	P	ZZ		25
1999	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	129	ZZ	UNK	P	ZZ		25
1999	1	SERC	FL	FL	FLPL	BIOMASS FACILITY 2	30	ZZ	BIO	P	ZZ		35
1999	1	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 6	13	ZZ	REF	P	ZZ		35
1999	1	WSCC	AZN	AZ	APS	GENERIC COGEN 4	4	CG	UNK	P	CG		
1999	1	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	2	CG	UNK	P	CG		
1999	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS	7	ZZ	UNK	T	ZZ		
1999	6	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-410	CG	NG	E	CG		
1999	9	ERCOT		TX	TUEC	NON-UTILITY GENERATOR	-74	CG	NG	E	CG		
1999	12	WSCC	NWP	ID	IPC	KANAKA RAPIDS (1)	7	HY	WAT	L	ZZ		
SUBTOTAL							-271						
2000	1	ECAR		IN	PSI	Non-Utility Gen. 8	5	IC	FO2	P	ZZ		
2000	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	16	ZZ	UNK	P	ZZ		25
2000	1	NPCC	ONT	ON	ONHY	NON-UTILITY GEN.	130	ZZ	UNK	P	ZZ		25
2000	1	SERC	FL	FL	FLPL	SOLID WASTE FACILITY 7	13	ZZ	REF	P	ZZ		35
2000	1	WSCC	AZN	AZ	APS	GENERIC COGEN 5	4	CG	UNK	L	CG		

Non-Utility Generator Additions
(January 1, 1991 - December 31, 2000)

Effective											Ownership		
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Unit Type	Fuel Type	Status	U/NUG	Joint	Notes
2000	1	WSCC	AZN	AZ	APS	REFUSE 2	10	ZZ	REF	L	ZZ		
2000	1	WSCC	CNV	CA	LDWP	MISC. SMALL COGEN	3	CG	UNK	P	CG		
2000	1	WSCC	NWP	ID	IPC	QF MISCELLANEOUS	7	ZZ	UNK	T	ZZ		
2000	7	WSCC	NWP	OR	PGE	MISC. RESOURCES	13	CG	NG	P	CG		
2000	7	WSCC	NWP	OR	PGE	MISC. RESOURCES	6	HY	WAT	P	ZZ		
SUBTOTAL							207						
TOTAL							20,102						

Table 80

Jointly-Owned Generating Unit Additions
(January 1, 1991 - December 31, 2000)

Effective								Unit	Fuel				
Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Type	Type	Status	U/NUG	Joint	Notes
1991	6	ECAR		OH	CG&E	W.H. Zimmer 1	1,300	ST	COL	V	U	J	1
1991	9	NPCC	NE	RI	NEES	OCEAN STATE 1	232	CC	GAS	V	ZZ	J	12
1991	9	NPCC	NE	RI	NEES	OCEAN STATE 2	232	CC	GAS	V	ZZ	J	12
SUBTOTAL							1,763						
1992	9	SERC	FL	FL	ORLA	INDIAN RIVER CT C	114	GT	NG	U	U	J	27
1992	10	SERC	FL	FL	ORLA	INDIAN RIVER CT D	114	GT	NG	U	U	J	27
SUBTOTAL							228						
1994	12	SERC	VAC	VA	VIEP	CLOVER 1	393	ST	COL	T	U	J	41
SUBTOTAL							393						
1995	12	SERC	VAC	VA	VIEP	CLOVER 2	393	ST	COL	T	U	J	41
SUBTOTAL							393						
1997	1	SERC	FL	FL	ORLA	STANTON ENERGY CENTER 2	436	ST	BIT	P	U	J	29
SUBTOTAL							436						
TOTAL							3,213						
UNDR	0	ECAR		OH	CEC	PERRY 2	1,185	NB	UR	V	U	J	4

Table 81

Generating Unit Retirements
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name		Mw S	Unit Type	Fuel Type	Status	U/NUG	Joint	Notes
1991	1	ECAR		MI	CP	Cobb 1		-52	ST	COL	R	U		
1991	1	ECAR		MI	CP	Cobb 2		-52	ST	COL	R	U		
1991	1	ECAR		MI	CP	Cobb 3		-52	ST	COL	R	U		
1991	1	MAAC		PA	GPUS	Front Street	1-3,5	-90	ST	BIT	R	U		
1991	1	MAAC		PA	GPUS	Front Street	4	-28	ST	BIT	R	U		
1991	1	MAAC		PA	GPUS	Williamsburg	5	-32	ST	BIT	R	U		
1991	1	MAPP		SD	NWPS	ARMOUR	1	-1	IC	FO2	R	U		
1991	5	MAAC		NJ	AECO	Deepwater	3	-21	ST	FO6	R	U		
1991	5	SERC	FL	FL	KEYW	KEY WEST STEAM 3		-15	ST	FO6	R	U		
1991	5	SERC	FL	FL	KEYW	KEY WEST STEAM 4		-10	ST	FO6	R	U		
1991	5	SERC	FL	FL	KEYW	KEY WEST STEAM 5		-15	ST	FO6	R	U		
1991	10	ECAR		OH	CG&E	Dicks Creek GT 3		-14	GT	NG	R	U		
1991	10	ECAR		OH	CG&E	Dicks Creek GT 4		-15	GT	FO2	R	U		
1991	10	ECAR		OH	CG&E	Miami Fort GT 2		-48	GT	FO2	R	U		
1991	10	ECAR		OH	CG&E	Miami Fort GT 3		-14	GT	FO2	R	U		
1991	10	ECAR		OH	CG&E	Miami Fort GT 4		-14	GT	FO2	R	U		
1991	11	NPCC	NE	CT	NU	BRANFORD 10		-17	JE	JF	R	U		15
1991	11	NPCC	NE	MA	NU	DOREEN 10		-17	JE	JF	R	U		15
1991	11	NPCC	NE	CT	NU	FRANKLIN DRIVE 10		-17	JE	JF	R	U		15
1991	11	NPCC	NE	MA	NU	SILVER LAKE 10		-11	GT	FO2	R	U		15
1991	11	NPCC	NE	MA	NU	SILVER LAKE 11		-13	GT	FO2	R	U		15
1991	11	NPCC	NE	MA	NU	SILVER LAKE 12		-14	GT	FO2	R	U		15
1991	11	NPCC	NE	MA	NU	SILVER LAKE 13		-14	GT	FO2	R	U		15
1991	11	NPCC	NE	CT	NU	TORRINGTON TERMINAL		-17	JE	JF	R	U		15
1991	11	NPCC	NE	CT	NU	TRACY GT		-11	GT	FO2	R	U		15
1991	11	NPCC	NE	CT	NU	TUNNEL JET 10		-17	JE	JF	R	U		15
1991	11	NPCC	NE	MA	PMLP	WARREN STREET 1		-2	IC	FO2	R	U		
1991	11	NPCC	NE	MA	PMLP	WARREN STREET 2		-2	IC	FO2	R	U		
1991	11	NPCC	NE	MA	PMLP	WARREN STREET 3		-2	IC	FO2	R	U		
1991	11	NPCC	NE	MA	PMLP	WARREN STREET 4		-4	IC	FO2	R	U		
1991	11	NPCC	NE	MA	NU	WOODLAND ROAD 10		-17	JE	JF	R	U		15
SUBTOTAL								-648						
1992	1	WSCC	RMP	CO	PSC	RALSTON HYDRO FACILITY		0	HY	WAT	R	ZZ		
1992	3	SERC	FL	FL	LALW	LARSEN 5		-24	ST	NG	R	U		
1992	3	SPP	SE	LA	CAJN	OPELOUSAS 1 & 2		-34	ST	GAS	R	U		
1992	6	ASCC		AK	CEA	BERNICE 1		-8	GT	NG	R	U		
1992	7	MAPP		SA	SASK	ESTEVAN	2	-9	ST	LIG	R	U		
1992	7	MAPP		SA	SASK	ESTEVAN	3	-13	ST	LIG	R	U		
1992	7	MAPP		SA	SASK	ESTEVAN	4	-19	ST	LIG	R	U		
1992	9	NPCC	NE	CT	NU	DEVON 3		-68	ST	FO6	R	U		17
1992	9	NPCC	NE	CT	NU	DEVON 4		-50	ST	FO6	R	U		17
1992	10	ECAR		OH	CG&E	Dicks Creek GT 5		-15	GT	FO2	R	U		
1992	10	ECAR		OH	CG&E	Miami Fort GT 1		-48	GT	FO2	R	U		
1992	10	ECAR		OH	CG&E	Miami Fort GT 5		-14	GT	FO2	R	U		
1992	10	ECAR		OH	CG&E	Miami Fort GT 6		-15	GT	FO2	R	U		
1992	11	SERC	FL	FL	JACO	SOUTHSIDE 1		0	ST	UNK	R	U		28
SUBTOTAL								-317						
1993	0	ASCC		AK	SES	SEWARD 1		-2	IC	FO2	R	U		
1993	0	ASCC		AK	SES	SEWARD 2		-2	IC	FO2	R	U		
1993	1	SERC	FL	FL	JACO	SOUTHSIDE 2		0	ST	UNK	R	U		28
1993	5	NPCC	NE	CT	NU	DEVON 5		-48	ST	FO6	R	U		17
1993	5	NPCC	NE	CT	NU	DEVON 6		-68	ST	FO6	R	U		17
1993	5	NPCC	NE	CT	NU	MIDDLETOWN 1		-70	ST	FO6	R	U		17
1993	11	NPCC	NE	MA	CES	BLACKSTONE 1		-14	ST	FO6	R	U		19
1993	11	NPCC	NE	MA	CES	BLACKSTONE 3		0	ST	FO6	R	U		19
1993	11	NPCC	NE	MA	CES	BLACKSTONE 4		-2	ST	FO6	R	U		19
SUBTOTAL								-204						
1994	5	MAAC		MD	DPLC	Easton	4	-1	IC	FO2	R	U		
1994	5	MAAC		MD	DPLC	Easton	5	-1	IC	FO2	R	U		
1994	5	MAAC		MD	DPLC	Easton	6	-1	IC	FO2	R	U		
1994	5	MAAC		MD	DPLC	Easton	7	-2	IC	FO2	R	U		

Table 81 (cont.)

Generating Unit Retirements
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name		Mw S	Unit Type	Fuel Type	Status	U/NUG	Joint	Notes
1994	6	MAAC		UN	BCCO	Unspecified Retirement		-126	ST	FO6	R	U		
1994	12	MAPP		IA	IELP	BURLINGTON GT	1	-17	GT	NG	R	U		
1994	12	MAPP		IA	IELP	BURLINGTON GT	2	-16	GT	NG	R	U		
1994	12	MAPP		IA	IELP	BURLINGTON GT	3	-16	GT	NG	R	U		
1994	12	MAPP		IA	IELP	BURLINGTON GT	4	-17	GT	NG	R	U		
1994	12	MAPP		IA	IELP	NORTH CENTERVILLE	1	-24	GT	FO2	R	U		
1994	12	MAPP		IA	IELP	NORTH CENTERVILLE	2	-25	GT	FO2	R	U		
SUBTOTAL								-245						
1995	6	SERC	FL	FL	FKEC	MARATHON 3		-3	IC	FO2	R	U		
1995	6	SPP	N	KS	EMDE	RIVERTON 6		-32	ST	NG	R	U		
1995	7	WSCC	NWP	ID	USPN	MINIDOKA 1-5		-6	HY	WAT	R	U		
1995	10	ECAR		OH	CG&E	Dicks Creek GT 1		-92	JE	NG	R	U		
1995	10	WSCC		AB	APL	STURGEON 1-2		-14	GT	NG	R	U		
1995	11	NPCC	NE	NH	PSNH	SCHILLER 3		-29	ST	FO6	R	U		22
SUBTOTAL								-176						
1996	1	SERC	FL	FL	GAMW	J. R. KELLY 7		-20	ST	NG	R	U		
1996	3	SERC	SOU	AL	SOEG	GASTON	A	-16	CT	OIL	R	U	J	36
1996	10	WSCC		AB	APL	SIMONETTE		-12	GT	NG	R	U		
SUBTOTAL								-48						
1997	5	MAAC		MD	DPLC	Easton	8	-2	IC	FO2	R	U		
1997	6	SERC	FL	FL	FKEC	MARATHON 4		-3	IC	FO2	R	U		
1997	10	ECAR		OH	CG&E	Beckjord GT 1		-46	GT	FO2	R	U		
1997	10	ECAR		OH	CG&E	Beckjord GT 2		-47	GT	FO2	R	U		
1997	11	NPCC	NE	ME	CMP	W.F. WYMAN 1		-54	ST	FO6	R	U		18
1997	12	ERCOT		TX	WETU	ABILENE #4		-18	ST	NG	R	U		
1997	12	ERCOT		TX	WETU	FT. STOCKTON #2		-5	GT	NG	R	U		
1997	12	ERCOT		TX	WETU	LAKE PAULINE #1		-19	ST	NG	R	U		
SUBTOTAL								-194						
1998	1	ERCOT		TX	TUEC	HANDLEY # 1		-45	ST	NG	R	U		
1998	1	ERCOT		TX	TUEC	HANDLEY # 2		-80	ST	NG	R	U		
1998	1	ERCOT		TX	TUEC	TRINIDAD # 5		-70	ST	NG	R	U		
1998	1	SPP	WC	OK	PSOK	TULSA 3		0	ST	NG	R	U		
1998	6	MAIN	WUM	WI	WPS	PULLIAM 3, 4		-54	ST	BIT	R	U		
1998	10	ECAR		OH	CG&E	Beckjord GT 3		-47	GT	FO2	R	U		
1998	10	ECAR		OH	CG&E	Beckjord GT 4		-46	GT	FO2	R	U		
1998	11	NPCC	NE	NH	PSNH	CONWAY DIESELS 1-3		-3	IC	FO2	R	U		22
1998	11	NPCC	NE	ME	CMP	W. F. WYMAN 2		-54	ST	FO6	R	U		18
1998	12	ERCOT		TX	WETU	RIO PECOS #5		-39	CA	NG	R	U		
SUBTOTAL								-438						
1999	1	ERCOT		TX	TUEC	MORGAN CREEK # 2		-22	ST	NG	R	U		
1999	1	ERCOT		TX	TUEC	MORGAN CREEK # 3		-44	ST	NG	R	U		
1999	1	ERCOT		TX	TUEC	NORTH MAIN # 4		-80	ST	NG	R	U		
1999	1	SPP	SE	AR	ENTR	HARVEY COUCH 1		-30	ST	NG	R	U		
1999	1	SPP	SE	MS	ENTR	REX BROWN 1		-36	ST	NG	R	U		
1999	6	SERC	FL	FL	FKEC	MARATHON 5		-3	IC	FO2	R	U		
1999	10	WSCC		AB	APL	BATTLE R 1-2		-63	ST	SUB	R	U		
1999	12	SPP	SE	AR	ENTR	LYNCH 2.		-74	ST	NG	R	U		
SUBTOTAL								-352						
2000	1	ECAR		MI	CP	Big Rock Point		-67	NB	UR	R	U		
2000	1	ERCOT		TX	TUEC	DALLAS # 9		-70	ST	NG	R	U		
2000	1	ERCOT		TX	TUEC	DALLAS #3		-75	ST	NG	R	U		
2000	1	ERCOT		TX	TUEC	MOUNTAIN CREEK # 2		-33	ST	NG	R	U		
2000	1	ERCOT		TX	TUEC	MOUNTAIN CREEK # 3		-70	ST	NG	R	U		
2000	1	MAIN	SCI	IL	CIPS	MEREDOSIA 1		-62	ST	COL	R	U		
2000	1	MAIN	SCI	IL	CIPS	MEREDOSIA 2		-62	ST	COL	R	U		
2000	1	SERC	FL	FL	GAMW	J. R. KELLY 8		-41	ST	NG	R	U		

Table 81 (cont.)

Generating Unit Retirements
(January 1, 1991 - December 31, 2000)

Effective Year	Mnth	Region	Subreg	St Prov	Utility	Unit Name	Mw S	Unit Type	Fuel Type	Status	U/NUG	Joint	Notes
2000	1	SPP	WC	OK	PSOK	SOUTHWESTERN 1	-80	ST	NG	R	U		
2000	3	MAAC		NJ	GPUS	L&D Landfill - NUG	-2	IC	GAS	R	ZZ		
2000	3	SERC	SOU	GA	GEPC	ATKINSON 1-4	-236	ST	NG	R	U		
2000	3	SERC	SOU	AL	ALAP	CHICKASAW 3	-50	ST	NG	R	U		
2000	3	SERC	SOU	MS	MIPR	STANDARD OIL 1-4	-58	CT	NG	R	U		
2000	4	MAPP		MB	MH	BRANDON 1	-30	ST	LIG	R	U		
2000	4	MAPP		MB	MH	BRANDON 2	-30	ST	LIG	R	U		
2000	4	MAPP		MB	MH	BRANDON 3	-30	ST	LIG	R	U		
2000	4	MAPP		MB	MH	BRANDON 4	-30	ST	LIG	R	U		
2000	4	SERC	FL	FL	TALL	SAM PURDOM 5	-23	ST	NG	R	U		
2000	5	SPP	N	MO	STJO	LAKE ROAD 3	-13	ST	NG	R	U		
2000	7	NPCC	NE	MA	NEES	MASSACHUSETTS YANKEE	-170	NP	UR	R	U		23
2000	9	SPP	WC	OK	PSOK	WELEETKA 4	-51	GT	NG	R	U		45
2000	9	SPP	WC	OK	PSOK	WELEETKA 5	-51	GT	NG	R	U		45
2000	9	SPP	WC	OK	PSOK	WELEETKA 6	-48	GT	NG	R	U		45
2000	10	WSCC		AB	APL	RAINBOW 1-2	-57	GT	NG	R	U		
2000	10	WSCC		AB	EP	ROSSDALE 8-10	-216	ST	NG	R	U		
2000	11	NPCC	NB	NB	NBPO	Chatham 1	-9	ST	FO6	R	U		
2000	11	NPCC	NB	NB	NBPO	Grand Lake 5	-5	ST	COL	R	U		
2000	11	NPCC	NB	NB	NBPO	Grand Lake 6	-5	ST	COL	R	U		
2000	11	NPCC	NE	MA	CMP	CAPE GT 4	-16	GT	FO2	R	U		
2000	11	NPCC	NE	MA	CMP	CAPE GT 5	-17	GT	FO2	R	U		
2000	11	NPCC	NE	NH	PSNH	MERRIMACK JET 2	-20	JE	JF	R	U		22
2000	11	NPCC	NE	ME	CMP	W. F. WYMAN 3	-116	ST	FO6	R	U		19
2000	11	NPCC	NE	NH	PSNH	WHITE LAKE JET	-20	JE	JF	R	U		22
2000	12	SPP	SE	LA	ENTR	A.B.PATERSON 3	-56	ST	NG	R	U		
2000	12	SPP	SE	AR	ENTR	LAKE CATHERINE 1	-52	ST	NG	R	U		
2000	12	SPP	SE	AR	ENTR	LAKE CATHERINE 2	-51	ST	NG	R	U		
SUBTOTAL							-2,022						
TOTAL							-4,642						

Notes to Tables 72-81

1 CG&E 605MW, DP&L 365MW, AEP 330MW. The owners of this plant, which has been under construction as a nuclear unit, announced on January 21, 1984, that the plant design will be converted from nuclear to coal-fired.

2 These CTs are proxy for DSM measures. The need for this capacity should be met largely by DSM.

3 Best combination of combustion turbines, load management, dispersed generation, and/or firm purchases.

4 CEC(605MW),OE(418MW),DLCO(161MW). Construction activity on Perry 2 has been suspended. Options with respect to the completion and timing of Perry 2 are being evaluated. A decision regarding the completion of the unit is not expected until all options have been evaluated. Unit capacity excluded from utilities' & NERC's forecast.

5 Capacity needed to maintain reserve at approx. 20%.

6 Approved in Resource Plan, but not under construction.

7 May be purchases, demand reduction or capacity.

8 Part of CWLP's coal gasification/combined cycle demonstrated plant. Lakeside GT1 and Lakeside 4 will be operated as a natural gas-fired combined cycle plant beginning in 6/94 and will be equipped with a coal gasifier in 1995.

9 Non-utility generators at various locations.

10 Part of New York state competitive bidding process.

11 Fuel type: methane.

12 NEES (48.5%),EUA (28%), BECO (23.5%). Although BECO has a power contract with Ocean State Power, they are not joint owners of the project.

13 Hay Road unit #4 will operate on the waste heat from Hay Road units 1, 2, and 3.

14 Facilities qualifying under PURPA regulations which may be waste burning (trash, waste coal), small hydro, third party financed or self-generation (in excess of internal load served), wind, solar, etc.

15 Retirement may be deferred if additional capacity sales are made.

16 Fuel type: gas and/or oil.

17 Retirement may be deferred if additional capacity sales are made. Candidate for repowering in a combined cycle configuration.

18 Candidates for repowering in a combined cycle configuration. Candidates for life extension.

19 Candidate for life extension.

20 Fuel type: gas and/or propane.

21 Units are repowered by adding new combustion turbines and new heat recovery steam generators to existing or replacement steam units. Phased in-service dates with 1st unit expected early 1995 and remaining units by summer, 1995. Capacity shown represents the increase to the existing capacity of the unit.

22 Continued operation will be considered at a future date.

23 Represents license expiration. Application for license renewal currently under review.

24 NB Power is actively pursuing a 150 MW DSM option to defer new capacity in this period. However, for modeling purposes this capacity is included as a 150 MW CT.

25 Unit type includes industrial non-utility generation, power from municipal waste, and small hydro developments.

26 The capacity shown as special projects results from demonstrated improvements made in reliably running units above their continuous capability for peaking requirements.

27 ORLA(90MW),FMPA(24MW).

28 Unit retired from inactive reserve.

29 ORLA(330MW),FMPA(89MW),KUAM(17MW).

30 Under contract.

31 No contract.

32 Under negotiations.

33 Not a qualifying facility. Purchases are from a non-utility generator source. This capability represents the maximum MW available. Hourly availability will be affected by usage pattern of the capacity by SECI.

34 Discussions.

35 Potential project.

36 ALAP (50%), GEPC (50%).

37 Compressed air energy storage.

38 Repowering existing units to combined cycle.

39 CAPO has idendified the need for additional peaking capacity in the mid 1990's. No commitments have been made for this capacity, however, CAPO's least cost integrated resource plan indicates that combustion turbines (CTs) are the best option for meeting this need. As a result, large simple cycle CTs are being considered.

40 SOCA has budgeted this for planning purposes only. SOCA is pursuning evaluation of capacity purchases in lieu of new gas turbine capacity.

41 Capacity includes ODEC's 50% share of unit.

42 VIEP has determined the need for additional capacity in the years designated and the units shown could provide for that need. However, none of the units are planned or committed at this time and new or different sources may provide for that need depending upon conditions at the time.

43 Fuel is landfill gas.

44 KACP (50%), Unknown (50%).

45 Weleetka units 4-6 are to be converted for use as part of a combined cycle plant.

46 Construction suspended on WNP units. WNP 1 and WNP 3 are being designated as a 2490 MW 'secured option'. Unit capacity excluded from utility's and NERC's forecast.

47 Fuel type: biomass and/or coal.

48 Unit type includes industrial non-utility generation, power from municipal waste, and small hydro developments.

Transmission Lines (230 kV and Above)

Projections 1991-2000

As of December 31, 1990, the transmission systems in the United States were comprised of about 147,000 circuit miles of transmission lines operating at voltages of 230 kV or higher. Lines in Canada totaled over 41,000 circuit miles.

Utilities plan to add 12,600 circuit miles of new transmission over the 1991-2000 period in the United States and 8,800 circuit miles in Canada.

Definitions

Circuit Miles — Total length in miles of separate circuits regardless of how many conductors per circuit.

kV — Kilovolt. One thousand volts.

Table 82

Existing Transmission (December 31, 1990) - Circuit Miles

	AC VOLTAGE (kV)					DC VOLTAGE (±kV)					AC & DC
	230	345	500	765	Total	250-300	400	450	500	Total	TOTAL
United States											
ECAR	1108	11810	852	2022	15792	0	0	0	0	0	15792
ERCOT	0	6874	0	0	6874	0	0	0	0	0	6874
MAAC	4822	170	1676	0	6668	0	0	0	0	0	6668
MAIN	241	5181	0	90	5512	0	0	0	0	0	5512
Cmnwlth Edison	0	2462	0	90	2552	0	0	0	0	0	2552
East Missouri	90	985	0	0	1075	0	0	0	0	0	1075
S Cent Illinois	48	788	0	0	836	0	0	0	0	0	836
Wis-Upper Mich	103	946	0	0	1049	0	0	0	0	0	1049
MAPP-US	7222	5125	642	0	12989	465	436	0	0	901	13890
NPCC-US	1534	4363	5	316	6218	0	0	192	0	192	6410
New York	1090	2612	5	316	4023	0	0	0	0	0	4023
NEPOOL	444	1751	0	0	2195	0	0	192	0	192	2387
SERC	19911	2	7614	0	27527	0	0	0	0	0	27527
Florida	4586	0	1192	0	5778	0	0	0	0	0	5778
Southern	6180	0	2163	0	8343	0	0	0	0	0	8343
TVA	30	2	2401	0	2433	0	0	0	0	0	2433
VACAR	9115	0	1858	0	10973	0	0	0	0	0	10973
SPP	4451	4661	2096	0	11208	0	0	0	0	0	11208
Southeast	2426	98	2003	0	4527	0	0	0	0	0	4527
West Central	1430	2344	47	0	3821	0	0	0	0	0	3821
Northern	595	2219	46	0	2860	0	0	0	0	0	2860
WSCC-US[a]	31222	9762	11073	0	52057	0	0	0	1333	1333	53390
NW Power Pool	12755	4095	5674	0	22524	0	0	0	264	264	22788
Rocky Mtn	4101	919	0	0	5020	0	0	0	0	0	5020
Ariz-N. Mex	2464	4184	1676	0	8324	0	0	0	0	0	8324
Calif-So. Nev	11902	564	3723	0	16189	0	0	0	1069	1069	17258
TOTAL(U.S.)	70511	47948	23958	2428	144845	465	436	192	1333	2426	147271
Canada											
MAPP-CAN	4163	0	130	0	4293	0	0	1139	0	1139	5432
NPCC-CAN	11967	4999	1767	6257	24990	0	0	795	0	795	25785
New Brunswick	328	661	0	0	989	0	0	0	0	0	989
Nova Scotia	728	125	0	0	853	0	0	0	0	0	853
Ontario	8531	4	1767	0	10302	0	0	0	0	0	10302
Quebec[b]	2380	4209	0	6257	12846	0	0	795	0	795	13641
WSCC-CAN[a]	6077	266	3456	0	9799	47	0	0	0	47	9846
TOTAL(Canada)	22207	5265	5353	6257	39082	47	0	1934	0	1981	41063
Mexico											
WSCC-MEX	425	0	0	0	425	0	0	0	0	0	425
NERC-Total	93143	53213	29311	8685	184352	512	436	2126	1333	4407	188759
ASCC	141	0	0	0	141	0	0	0	0	0	141

[a] Some 287 kV and 360 kV lines are included in the 345 kV category for WSCC.

[b] For Québec, the 345 kV category represents 315 kV lines and the 765 kV category represents 735 kV lines.

Table 83

1991 - 1995 Planned Transmission Additions - Circuit Miles

	AC VOLTAGE (kV)					DC VOLTAGE (±kV)					AC & DC
	230	345	500	765	Total	250-300	400	450	500	Total	TOTAL
United States											
ECAR	105	308	0	0	413	0	0	0	0	0	413
ERCOT	0	576	0	0	576	0	0	0	0	0	576
MAAC	200	0	45	0	245	0	0	0	0	0	245
MAIN	0	235	0	0	235	0	0	0	0	0	235
Cmnwlth Edison	0	100	0	0	100	0	0	0	0	0	100
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	59	0	0	59	0	0	0	0	0	59
Wis-Upper Mich	0	76	0	0	76	0	0	0	0	0	76
MAPP-US	27	210	0	0	237	0	0	0	0	0	237
NPCC-US	36	125	0	0	161	0	0	0	0	0	161
New York	0	27	0	0	27	0	0	0	0	0	27
NEPOOL	36	98	0	0	134	0	0	0	0	0	134
SERC	1333	0	458	0	1791	0	0	0	0	0	1791
Florida	582	0	198	0	780	0	0	0	0	0	780
Southern	304	0	79	0	383	0	0	0	0	0	383
TVA	0	0	32	0	32	0	0	0	0	0	32
VACAR	447	0	149	0	596	0	0	0	0	0	596
SPP	171	279	14	0	464	0	0	0	0	0	464
Southeast	132	0	14	0	146	0	0	0	0	0	146
West Central	39	174	0	0	213	0	0	0	0	0	213
Northern	0	105	0	0	105	0	0	0	0	0	105
WSCC-US[a]	1310	173	1212	0	2695	0	0	0	0	0	2695
NW Power Pool	508	70	146	0	724	0	0	0	0	0	724
Rocky Mtn	168	106	0	0	274	0	0	0	0	0	274
Ariz-N. Mex	313	-3	260	0	570	0	0	0	0	0	570
Calif-So. Nev	321	0	806	0	1127	0	0	0	0	0	1127
TOTAL(U.S.)	3182	1906	1729	0	6817	0	0	0	0	0	6817
Canada											
MAPP-CAN	550	0	0	0	550	0	0	0	0	0	550
NPCC-CAN	710	651	561	768	2690	0	0	1	0	1	2691
New Brunswick	8	187	0	0	195	0	0	0	0	0	195
Nova Scotia	50	166	0	0	216	0	0	0	0	0	216
Ontario	476	0	561	0	1037	0	0	0	0	0	1037
Quebec[b]	176	298	0	768	1242	0	0	1	0	1	1243
WSCC-CAN[a]	147	38	205	0	390	0	0	0	0	0	390
TOTAL(Canada)	1407	689	766	768	3630	0	0	1	0	1	3631
Mexico											
WSCC-MEX	68	0	0	0	68	0	0	0	0	0	68
NERC-Total	4657	2595	2495	768	10515	0	0	1	0	1	10516
ASCC	0	0	0	0	0	0	0	0	0	0	0

---

[a] Some 287 kV and 360 kV lines are included in the 345 kV category for WSCC.

[b] For Québec, the 345 kV category represents 315 kV lines and the 765 kV category represents 735 kV lines.

1996 - 2000 Planned Transmission Additions - Circuit Miles

	AC VOLTAGE (kV)					DC VOLTAGE (±kV)					AC & DC
	230	345	500	765	Total	250-300	400	450	500	Total	TOTAL
United States											
ECAR	11	137	116	110	374	0	0	0	0	0	374
ERCOT	0	519	0	0	519	0	0	0	0	0	519
MAAC	151	0	62	0	213	0	0	0	0	0	213
MAIN	0	104	0	0	104	0	0	0	0	0	104
Cmwlth Edison	0	15	0	0	15	0	0	0	0	0	15
East Missouri	0	0	0	0	0	0	0	0	0	0	0
S Cent Illinois	0	89	0	0	89	0	0	0	0	0	89
Wis-Upper Mich	0	0	0	0	0	0	0	0	0	0	0
MAPP-US	91	38	0	0	129	0	0	0	0	0	129
NPCC-US	41	87	0	0	128	0	0	0	0	0	128
New York	0	0	0	0	0	0	0	0	0	0	0
NEPOOL	41	87	0	0	128	0	0	0	0	0	128
SERC	740	0	642	0	1382	0	0	0	0	0	1382
Florida	167	0	345	0	512	0	0	0	0	0	512
Southern	282	0	55	0	337	0	0	0	0	0	337
TVA	0	0	36	0	36	0	0	0	0	0	36
VACAR	291	0	206	0	497	0	0	0	0	0	497
SPP	146	196	154	0	496	0	0	0	0	0	496
Southeast	168	0	154	0	322	0	0	0	0	0	322
West Central	-22	196	0	0	174	0	0	0	0	0	174
Northern	0	0	0	0	0	0	0	0	0	0	0
WSCC-US[a]	557	596	1334	0	2487	0	0	0	0	0	2487
NW Power Pool	287	80	823	0	1190	0	0	0	0	0	1190
Rocky Mtn	-25	390	0	0	365	0	0	0	0	0	365
Ariz-N. Mex	141	124	1	0	266	0	0	0	0	0	266
Calif-So. Nev	154	2	510	0	666	0	0	0	0	0	666
TOTAL(U.S.)	1737	1677	2308	110	5832	0	0	0	0	0	5832
Canada											
MAPP-CAN	576	0	177	0	753	0	0	0	510	510	1263
NPCC-CAN	403	890	1112	1040	3445	0	0	0	0	0	3445
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	22	0	0	0	22	0	0	0	0	0	22
Ontario	251	0	1112	0	1363	0	0	0	0	0	1363
Quebec[b]	130	890	0	1040	2060	0	0	0	0	0	2060
WSCC-CAN	226	0	272	0	498	0	0	0	0	0	498
TOTAL(Canada)	1205	890	1561	1040	4696	0	0	0	510	510	5206
Mexico											
WSCC-MEX	0	0	0	0	0	0	0	0	0	0	0
NERC-Total	2942	2567	3869	1150	10528	0	0	0	510	510	11038
ASCC	0	0	0	0	0	0	0	0	0	0	0

[a] Some 287 kV and 360 kV lines are included in the 345 kV category for WSCC (U.S.).

[b] For Québec, the 345 kV category represents 315 kV lines and the 765 kV category represents 735 kV lines.

Table 85

Existing and Planned Transmission (December 31, 2000) - Circuit Miles

	AC VOLTAGE (kV)					DC VOLTAGE (±kV)					AC & DC
	230	345	500	765	Total	250-300	400	450	500	Total	TOTAL
United States											
ECAR	1224	12255	968	2132	16579	0	0	0	0	0	16579
ERCOT	0	7968	0	0	7968	0	0	0	0	0	7968
MAAC	5173	170	1783	0	7126	0	0	0	0	0	7126
MAIN	241	5520	0	90	5851	0	0	0	0	0	5851
Cmnwlth Edison	0	2577	0	90	2667	0	0	0	0	0	2667
East Missouri	90	985	0	0	1075	0	0	0	0	0	1075
S Cent Illinois	48	936	0	0	984	0	0	0	0	0	984
Wis-Upper Mich	103	1022	0	0	1125	0	0	0	0	0	1125
MAPP-US	7340	5373	642	0	13355	465	436	0	0	901	14256
NPCC-US	1611	4575	5	316	6507	0	0	192	0	192	6699
New York	1090	2639	5	316	4050	0	0	0	0	0	4050
NEPOOL	521	1936	0	0	2457	0	0	192	0	192	2649
SERC	21984	2	8714	0	30700	0	0	0	0	0	30700
Florida	5335	0	1735	0	7070	0	0	0	0	0	7070
Southern	6766	0	2297	0	9063	0	0	0	0	0	9063
TVA	30	2	2469	0	2501	0	0	0	0	0	2501
VACAR	9853	0	2213	0	12066	0	0	0	0	0	12066
SPP	4768	5136	2264	0	12168	0	0	0	0	0	12168
Southeast	2726	98	2171	0	4995	0	0	0	0	0	4995
West Central	1447	2714	47	0	4208	0	0	0	0	0	4208
Northern	595	2324	46	0	2965	0	0	0	0	0	2965
WSCC-US[a]	33089	10531	13619	0	57239	0	0	0	1333	1333	58572
NW Power Pool	13550	4245	6643	0	24438	0	0	0	264	264	24702
Rocky Mtn	4244	1415	0	0	5659	0	0	0	0	0	5659
Ariz-N. Mex	2918	4305	1937	0	9160	0	0	0	0	0	9160
Calif-So. Nev	12377	566	5039	0	17982	0	0	0	1069	1069	19051
TOTAL(U.S.)	75430	51530	27995	2538	157493	465	436	192	1333	2426	159919
Canada											
MAPP-CAN	5289	0	307	0	5596	0	0	1139	510	1649	7245
NPCC-CAN	13080	6540	3440	8065	31125	0	0	796	0	796	31921
New Brunswick	336	848	0	0	1184	0	0	0	0	0	1184
Nova Scotia	800	291	0	0	1091	0	0	0	0	0	1091
Ontario	9258	4	3440	0	12702	0	0	0	0	0	12702
Quebec[b]	2686	5397	0	8065	16148	0	0	796	0	796	16944
WSCC-CAN[a]	6450	304	3933	0	10687	47	0	0	0	47	10734
TOTAL(Canada)	24819	6844	7680	8065	47408	47	0	1935	510	2492	49900
Mexico											
WSCC-MEX	493	0	0	0	493	0	0	0	0	0	493
NERC-Total	100742	58374	35675	10603	205394	512	436	2127	1843	4918	210312
ASCC	141	0	0	0	141	0	0	0	0	0	141

---

[a] Some 287 kV and 360 kV lines are included in the 345 kV category for WSCC.
[b] For Québec, the 345 kV category represents 315 kV lines and the 765 kV category represents 735 kV lines.

Appendix A Generating Unit Codes and Abbreviations

Unit Type

ST	Steam Turbine-Non Nuclear
NB	Steam-BWR Nuclear
NP	Steam-PWR Nuclear
NH	Steam-HTGR Nuclear
CD	CANDU
IC	Internal Combustion
GT	Combustion Turbine (Gas Turbine)
HY	Conventional Hydro
PS	Pumped Storage Hydro
CW	Combined Cycle-Steam Portion-Waste Heat Only
CA	Combined Cycle-Steam Portion-Auxiliary Fired
CT	Combined Cycle-Combustion Turbine Portion
CC	Combined Cycle
IG	Integrated Coal Gasification Combined Cycle (IGCC)
CG	Cogeneration
JE	Jet Engine
FC	Fuel Cell
SO	Solar
WM	Wind Power
GE	Geothermal
ZZ	None of the above
UN	Unknown at This Time
FB	Fluidized Bed Combustion
PB	Pressurized Fluidized Bed Combustion
AB	Atmoshperic Fluidized Bed Combustion

Construction Status

P	Planned for installation, but not utility authorized
L	Regulatory approval pending, but not under construction
T	Regulatory approval received, but not under construction
U	Under construction, less than approximately 50% of plant completed
V	Under construction, greater than approximately 50% of plant completed
R	Planned for retirement
E	Firm cogeneration contract expires

Ownership (Utility/Non-Utility)

U	Utility
CG	Non-utility Cogenerator
ZZ	Non-utility Small Power Producer and all other types of non-utility generators

Fuel Type

WH	Waste Heat
COL	Col-General
BIT	Bituminous Coal
SUB	Sub-Bituminous Coal
ANT	Anthracite Coal
LIG	Lignite Coal
PC	Petroleum Coke
CUL	Culm or Coal Waste
LNG	Liquified Natural Gas
MTH	Methanol
GAS	Gas-General
NG	Natural Gas
RG	Refinery Gas
BFG	Blast Furnace Gas
COG	Coke Oven Gas
UNK	Unknown at This Time
GST	Geothermal Steam
MUL	Multi-Fueled
REF	Refuse-Solid Waste
OIL	Oil-General
FO1	No.1 Fuel Oil
FO2	No.2 Fuel Oil
FO4	No.4 Fuel Oil
FO5	No.5 Fuel Oil
FO6	No.6 Fuel Oil
CRU	Crude Oil
TOP	Top Crude Oil
JF	Jet Fuel
KER	Kerosene
LPG	Liquid Propone Gas
RRO	Re-Refined Motor Oil
SNG	Synthetic Natural Gas
UR	Uranium
PL	Plutonium
WAT	Water
TH	Thorium
SUN	Sun
WND	Wind
G/C	Gas and/or Coal
O/C	Oil and/or Coal
W/G	Wood and/or Gas
W/O	Wood and/or Oil
WOD	Wood
WD	Wood and Wood Waste
BIO	Biomass
PEA	Peat
ZZ	None of the Above

Appendix B Utility Abbreviations

ASCC

AEA	Alaska Energy Authority
CEA	Chugach Electric Association, Inc.
SES	Seward Electric System

ECAR

AEP	American Electric Power
APS	Allegheny Power System
CEC	Centerior Energy Corporation
CG&E	The Cincinnati Gas & Electric Company
CP	Consumers Power Company
DECO	The Detroit Edison Company
DLCO	Duquesne Light Company
DP&L	The Dayton Power and Light Company
EKPC	East Kentucky Power Cooperative, Inc.
HAMI	Hamilton Department of Public Utilities - Electric Div.
IP&L	Indianapolis Power & Light Company
KUC	Kentucky Utilities Company
LG&E	Louisville Gas and Electric Company
OE	Ohio Edison Company
PSI	Public Service Company of Indiana, Inc.
SIGE	Soughern Indiana Gas and Electric Company

ERCOT

BEPC	Brazos Electric Cooperative
CPSA	City Public Service of San Antonio
HL&P	Houston Lighting & Power Company
TMPA	Texax Municipal Power Agency
TNMP	Texas-New Mexico Power Company
TUEC	TU Electric Company
WETU	West Texas Utilities Company

MAAC

AECO	Atlantic City Electric Company
BCCO	Baltimore Gas and Electric Company
DPLC	Delmarva Power & Light Company
GPUS	General Public Utilities Corporation
PLCO	Pennsylvania Power & Light Company
PPCO	Potomac Electric Power Company
PSCO	Public Service Electric and Gas Company
UGIC	UGI Corporation

MAIN

CECO	Commonwealth Edison Company
CIL	Central Illinois Light Company
CIPS	Central Illinois Public Service Company
CWLP	City Water, Light and Power, Springfield, Illinois
IPSP	Illinois Power-Soyland Power Pool
MGE	Madison Gas and Electric Company
MPU	Manitowoc, Wisconsin, Public Utilities
UE	Union Electric Company
WEP	Wisconsin Electric Power Company
WPL	Wisconsin Power and Light Company
WPPI	Wisconsin Public Power, Inc., SYSTEM
WPS	Wisconsin Public Service Corporation

MAPP

IELP	Iowa Electric Light and Power Company
IPR	Iowa Power Inc.
IPW	Interstate Power Company
ISU	Iowa Southern Utilities Company
MH	Manitoba Hydro-Electric Board
NSP	Northern States Power Company
NWPS	Northwestern Public Service Company
OPPD	Omaha Public Power District
OTP	Otter Tail Power Company
SASK	Saskatchewan Power Corporation
SMMP	Southern Minnesota Municipal Power Agency

NPCC

BECO	Boston Edison Company
BELD	Braintree Electric Light Department
BHE	Bangor Hydro-Electric Company
CEHG	Central Hudson Gas & Electric Corporation
CES	Commonwealth Electric System
CMP	Central Maine Power Company
COEN	Consolidated Edison Company of New York, Inc.
EUA	Eastern Utilities Associates
FGE	Fitchburg Gas and Electric Light Company
HYQB	Hydro-Quebec
LOIL	Long Island Lighting Company
MMWEC	Massachusetts Municipal Wholesale Electric Company
NBPO	New Brunswick Electric Power Commission
NEES	New England Electric System
NEYE	New York State Electric & Gas Corporation
NIMP	Niagara Mohawk Power Corporation
NSPC	Nova Scotia Power Corporation
NU	Northeast Utilities
ONHY	Ontario Hydro
ORRU	Orange & Rockland Utilities, Inc.
PMLP	Peabody Municipal Light Plant
POAS	New York Power Authority
PSNH	Public Service Company of New Hampshire
ROGE	Rochester Gas and Electric Corporation
TMLP	Taunton Muncipal Light Plant
UI	The United Illuminating Company
VTGP	Vermont Group

SERC

ALAP	Alabama Power Company
ALEC	Alabama Electric Cooperative, Inc.
CAPO	Carolina Power & Light Company
DUPC	Duke Power Company
FKEC	Florida Keys Electric Cooperative Association, Inc.
FLPC	Florida Power Corporation
FLPL	Florida Power & Light Company
FMPA	Florida Municipal Power Agency
FOPC	Fort Pierce Utilities Authority
GAMW	Gainesville Regional Utilities
GEPC	Georgia Power Company
GUPC	Gulf Power Company

Appendix B Utility Abbreviations

JACO	Jacksonville Electric Authority
KEYW	Utility Board of the City of Key West
KUAM	Kissimmee Utility Authority
LALW	City of Lakeland
MIPR	Mississippi Power Company
ODEC	Old Dominion Electric Cooperative
ORLA	Orlando Utilities Commission
SEAP	Southeastern Power Administration
SECI	Seminole Electric Cooperative, Inc.
SEPA	Southeastern Power Administration
SOCA	South Carolina Public Service Authority
SOCG	South Carolina Electric & Gas Company
SOEG	Southern Electric Generating Company
SOMI	South Mississippi Electric Power Association
TAEC	Tampa Electric Company
TALL	City of Tallahassee
TEVA	Tennessee Valley Authority
VEBM	City of Vero Beach
VIEP	Virginia Power Company

SPP

AREC	Arkansas Electric Cooperative Corporation
ASEC	Associated Electric Cooperative, Inc.
CAJN	Cajun Electric Power Cooperative
EMDE	The Empire District Electric Company
ENTR	Entergy Corporation
GRRD	Grand River Dam Authority
KACP	Kansas City Power & Light Company
KAMO	KAMO Electric Cooperative
LBPL	City of Lubbock, Texas
MIPU	Missouri Public Service Company
OKGE	Oklahoma Gas & Electric Company
OMPA	Oklahoma Municipal Power Authority
PSOK	Public Service Company of Oklahoma
SPRM	City Utilities, Springfield, Missouri
STJO	St. Joseph Light & Power Company
WINF	City of Winfield, Kansas

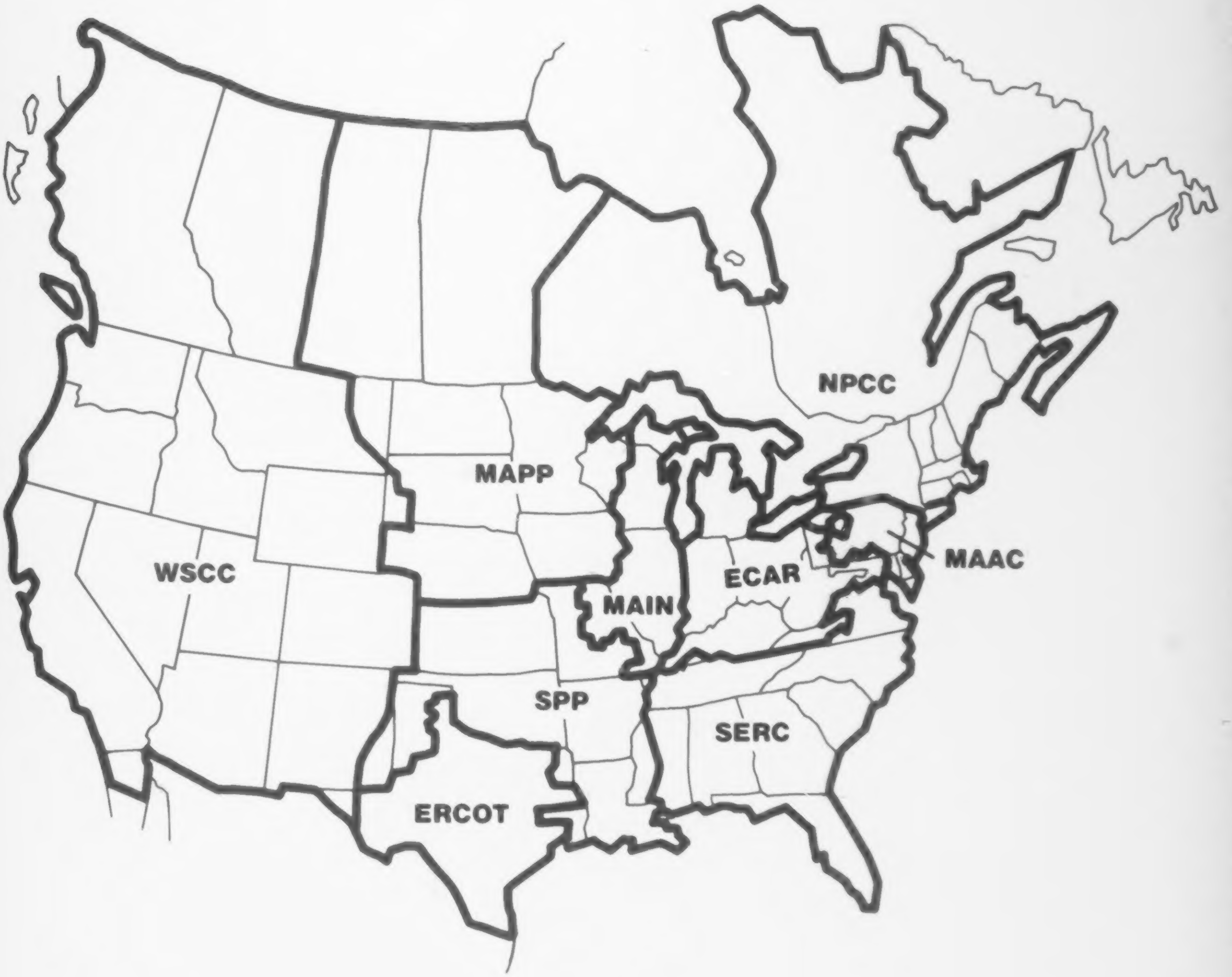
WSCC

APL	Alberta Power Limited
BCHA	British Columbia Hydro and Power Authority
BHPL	Black Hills Power and Light Company
BPA	Bonneville Power Administration
CDWR	Department of Water Resources/California
CFE	Comision Federal de Electricidad
CMH	Medicine Hat, City of
CSU	Colorado Springs Utilities
EP	Edmonton Power
EPE	El Paso Electric Company
EWEB	Eugene Water & Electric Board
IPC	Idaho Power Company
LDWP	Los Angeles Department of Water and Power
MID	Modesto Irrigation District
MWD	Metropolitan Water District/Southern California
NCPA	Northern California Power Agency
NEVP	Nevada Power Company
PEOG	PacificCorp Electric Operations Group
PGE	Portland General Electric Company
PG&E	Pacific Gas and Electric Company
PSC	Public Service Company of Colorado
PSPL	Puget Sound Power & Light Company
RDNG	Redding, City of
SCE	Southern California Edison Company
SCL	Seattle Department of Lighting (Seattle City Light)
SDGE	San Diego Gas & Electric Company
SHPD	Snohomish PUD - WA
SMUD	Sacramento Municipal Utility District
SNCL	Santa Clara, City of
SPP	Sierra Pacific Power Company
TAUC	TransAlta Utilities Corporation
TCL	Tacoma Department of Public Utilities (Tacoma City Light)
UAMP	Utah Associated Municipal Power Systems
USGP	U.S. Bureau of Reclamation-Great Plains
USLC	U.S. Bureau of Reclamation-Lower Colorado
USPN	U.S. Bureau of Reclamation-Pacific Northwest
USUC	U.S. Bureau of Reclamation-Upper Colorado
WKPL	West Kootenay Power Ltd.
WWPC	Washington Water Power Company, The

Appendix C NERC Region and Subregion Abbreviations

REGIONS	COUNTRY	SUBREGIONS
ECAR East Central Area Reliability Coordination Agreement	U.S.	None
ERCOT Electric Reliability Council of Texas	U.S.	None
MAAC Mid-Atlantic Area Council	U.S.	None
MAIN Mid-America Interconnected Network	U.S	CE — **Cmnwlth Edison** —Commonwealth Edison Company Subregion
	U.S.	EM — **East Missouri** — East Missouri Subregion
	U.S.	SCI — **S Cent Illinois** — South Central Illinois Group
	U.S.	WUM — **Wis-Upper Mich** — Wisconsin-Upper Michigan Subregion
MAPP Mid-Continent Area Power Pool	U.S.	None
	CANADA	None
NPCC Northeast Power Coordinating Council	U.S.	NY — **New York** — New York Power Pool
	U.S.	NE — **NEPOOL** — New England Power Pool
	CANADA	NB — **New Brunswick** — New Brunswick Electric Power Commission
	CANADA	NS — **Nova Scotia** — Nova Scotia Power Corporation
	CANADA	ONT — **Ontario** — Ontario Hydro
	CANADA	QUE — **Québec** — Hydro-Québec
SERC Southeastern Electric Reliability Council	U.S.	FL — **Florida** — Florida Subregion
	U.S.	SOU — **Southern** — Southern Subregion
	U.S.	TVA — Tennessee Valley Authority Subregion
	U.S.	VAC — **VACAR** — Virginia-Carolinas Subregion
SPP Southwest Power Pool	U.S.	SE — **Southeast** — Western Mississippi, Southeastern Texas, Eastern Arkansas, Southeastern Missouri, and Louisiana
	U.S.	WC — **West Central** — Western Arkansas, the Texas Panhandle, Northeast Texas, and Oklahoma
	U.S.	N — **Northern** -- Western Missouri and Kansas
WSCC Western Systems Coordinating Council	U.S.	NWP — **NW Pool** — Northwest Power Pool Area
	U.S.	RMP — **Rocky Mt Area** — Rocky Mountain Power Area
	U.S.	AZN — **Ariz-N.Mex** — Arizona-NewMexico Power Area
	U.S.	CNV — **Calif-So.Nev** — California-Southern Nevada Power Area
	CANADA	None
	MEXICO	None
ASCC (Affiliate Member) Alaska Systems Coordinating Council	U.S.	ASCC — Alaska Railbelt systems serving Anchorage Bowl, the Fairbanks area, and the Kenai Peninsula
	U.S.	

North American Electric Reliability Council



ECAR
East Central Area Reliability Coordination Agreement

ERCOT
Electric Reliability Council of Texas

MAAC
Mid-Atlantic Area Council

MAIN
Mid-America Interconnected Network

MAPP
Mid-Continent Area Power Pool

NPCC
Northeast Power Coordinating Council

SERC
Southeastern Electric Reliability Council

SPP
Southwest Power Pool

WSCC
Western Systems Coordinating Council

AFFILIATE

ASCC
Alaska Systems Coordinating Council

Copyright © 1991 by the North American Electric Reliability Council. All rights reserved.

101 College Road East, Princeton, New Jersey 08540-6601 • 609-452-8060